The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES—No. XLV.*

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SECTION III.

BLASTING MATERIALS.

LITHOFRACTEUR.—Another nitroglycerine compound, which has been recently brought out by Prof. Engell, of Cologne, and manufactured by Krebs Brothers, of Deutz, near Cologne, is that to which the name lithofracteur, or lithofracteur dynamite, has been given. Its most important constituent is nitroglycerine; the remaining (which can only be conjectured, since this material is manufactured under trade secrets) appear to be guncotton, or saltpetre, sulphur, and meal, treated with nitric acid. By some its composition has been given as 52 parts by weight of nitroglycerine, 30 of siliceous earthy matter and sand, 12 of powdered coal, 2 of sulphur, and 4 of cubic (soda) nitre; in which case it is essentially a compound of dynamite, but decidedly not a good mixture, having mixed with it a blasting powder which contains an excess of carbon. By others its composition has been given as 75 per cent. of nitroglycerine, the remaining 25 per cent. consisting of varying proportions of keiselguhr, guncotton, charcoal, potash, nitre, and sulphur. It is a black plastic substance, having a greasy touch, and floats in water, its specific gravity 0·94. In open air it burns quietly away on ignition; when placed in a bore hole it requires only a loose tamping, but it must be exploded by means of a percussion cap, or a fuse. The same advantages have been claimed for lithofracteur as for dynamite—namely, a saving in cost of labour for bore holes, a less number being required; the work is effected in a much shorter time; on the whole less blasting material is used, so that the extra cost under this item is fully compensated for. Its storage and use, like dynamite, are equally unattended with danger, and its non-liability to explosion during transport is demonstrated by the experiments made at Woolwich of attaching a mass of 5 lbs. of lithofracteur in a case to the buffer of a railway wagon, which was allowed to run down an inclined plane, and come into collision with another wagon at rest on the rails, which latter was heavily loaded with stones, without any explosion resulting. Besides, the cost and labour in repairing drills, &c., for any given work are lessened by at least one-half. It is said to have the advantage over dynamite inasmuch as it does not become inexplosive at a temperature even under 8° centrigrade, as has been asserted, but wrongfully, to be the case with dynamite. But as the manufacturers advise that the temperature of the material should not be allowed to fall below 10° centigrade, it must be concluded that, in common with dynamite, its explosion in such a case is a matter of some uncertainty. From trials which were made at the König's Mine, in Upper Silesia, its use was abandoned in favour of dynamite, the miners, who were paid by piece, declaring that they could not work any longer unless allowed to return to the use of dynamite. Mr. K. S. France, of Shrewsbury, has had it tried in connection with his quarries, and with satisfactory results. On the whole, it appears that lithofracteur must be considered as dynamite adulterated with the constituents of ordinary blasting powder, that its advantages are more nearly those of dynamite the less the adulteration, and that the greater the adulteration the less will be its advantages over gunpowder as compared with dynamite.

DUALIN.—Another nitroglycerine compound, which has lately been introduced to the mining public, and has come into somewhat extensive use, is that to which the name dualin has been given. It was brought out by Lieut. Dittmar, of Charlottenburg, Germany, in 1869. It is a yellowish brown powder, and appears to be a combination of nitroglycerine with Schultze's chemical powder, which, as we have already mentioned, consists of nitre and sawdust treated with concentrated nitric and sulphuric acids. Its composition has been given as 50 parts by weight of nitroglycerine, 30 parts of fine sawdust, and 20 of saltpetre. According to Lieut. Dittmar, and as appears probable from its composition, there is no liability of the spontaneous decomposition of the nitroglycerine, on account of the intimately mixed basic salt preventing the material becoming acid, and appears thus to be an attempt to put Prof. Suly's proposal into practice. As might have been expected from its composition, dualin possesses many properties in common with dynamite and lithofracture. It does not explode in open air, but burns quietly away. When, however, it is placed in a confined space and ignited it explodes with violence. It is usually tamped and fired like ordinary blasting powder by straws or fuses. If the tamping is loose, or if it is fired under water, a percussion fuse must be used. The object of firing the dualin with straws or ordinary fuses, like powder, appears to be to save expense, and in so far to have an advantage over dynamite, which cannot be fired without the use of an expensive fuse and percussion cap. This apparent advantage constitutes, however, its chief defect when compared with dynamite, since by regularly using a percussion cap to ignite the dynamite an explosion of the whole charge is certain, whilst when a quick match is used to ignite the dualin in many cases it will burn away without explosion. When a complete explosion of dualin takes place the resulting gases have no injurious effects on the miners; when, however, the explosion is incomplete, and a burning away of the dualin takes place, the resulting gases have an irritating effect and injurious influence on the health of the miners. This is in complete accordance with experience obtained by its use in the mines of the Mörkish Westphalian Company, near Iserlohn, and in several mines in Upper Silesia. All the advantages which dynamite and lithofracteur possess have been claimed for dualin. The great disadvantage in using dynamite as a blasting material in coal mines is that the explosion takes place so suddenly and violently shatters the coal, producing too much small coal. With the use of dualin, however, it is claimed, and according to trials at the König's Mine confirmed, that dualin gives a much greater percentage of large coal, probably on account of the smaller quantity (40 to 50 per cent.) which it contains. We have seen, however, that by lessening the percentage of nitroglycerine we can obtain a dynamite suitable, so far as strength goes, for blasting in coal mines. As the price of dualin is much less than that of dynamite, and its ignition by ordinary fuse costs less than that of dynamite, it is probable that it would much sooner come into general use, if it were not for the injurious and annoying effects of the gasses disengaged when a partial explosion and burning away of the dualin takes place, and which often occurs. We are not aware what are the resulting gases produced by the explosion of various nitroglycerine compounds under various conditions, but in them we have sufficient grounds for explaining the conflicting statements regarding the gas produced, and their effects on the human system. It has been claimed by the discoveres as another advantage in the use of dualin in the place of dynamite that the former never becomes hard, but always retains its plastic condition during all temperatures. The truth of this assertion remains yet to be proved; indeed, it is greatly to be doubted.

From what we have said respecting the composition and properties of nitroglycerine, dynamite, dualin, &c., and gunpowder, it will appear that by varying the composition of the constituents we could make a compound which with a larger percentage of nitroglycerine would on the one hand approach nitroglycerine in its properties, but with a less percentage, would in the case of such compounds as dualin approach more nearly in its properties to gunpowder. Among these intermediate compounds we may notice some mixtures which Nobel has patented. The strongest of these patented compounds has the following composition:—68 parts of boric nitrate; 12 parts of powdered coal, rich in hydrocarbons, saturated with 12 parts of nitroglycerine. Another, possessing nearly the same strength, is composed of 70 parts of boric nitrate, 10 parts of rosin, and 12 parts of nitroglycerine: 5 to 6 parts of sulphur are often added, for the same reasons that sulphur is used in the manufacture of gunpowder. The ignition takes place in the case of the other nitroglycene compounds we have mentioned by means of a percussion fuse. A very common fallacy exists that the addition to dynamite of other explosive compounds will make the resulting compound stronger than dynamite.* Any such addition of gunpowder, nitre, or other explosive substances, which are in themselves weaker than dynamite can only be considered as an adulteration, and such compounds cannot be expected to be stronger than dynamite.

The question will most probably have occurred to most persons why should the addition of such matters as the infusorial earth make dynamite and other nitroglycerine compounds less liable to explosion with a slight shock than nitroglycerine itself? According to Javal and Garnier, in the "Bulletin de la Société de l'Industrie Minérale," Paris, it is probably due to the same reason that a sand or earthwork wall is less affected by shot than a stone wall. The effect of the shot in the former case is confined to the spot where it strikes, burying itself a few yards beneath the surface, whilst in the latter case the shock is spread over some considerable distance, shattering the wall. So with dynamite, any shock or blow that it receives is spent in altering the position of the sand particles. In the case of pure nitroglycerine, whose elasticity as a fluid is nearly perfect, the shock is transmitted through the whole mass in its full intensity, the force being spent in vibrations rather than in changing the shape of the substance.

COMPOUNDS CONTAINING PICRIC ACID.

When pit coal is distilled the most abundant acid product given off is that commonly known as carbolic acid. The usual method is to collect the oil of tar, that distils over at a temperature of between 300° and 400°. This is treated with strong nitric acid. Long pale yellow brilliant rectangular plates or crystals of picric acid are precipitated, the solution is decanted, and the picric acid washed with cold water. The salts formed with picric acid crystallise with facility, and when heated decompose with violence.

Designolle has devised a blasting powder, in which instead of using saltpetre he makes use of a mixture of potassic carbozoate and saltpetre, and the use of sulphur is entirely dispensed with. Its advantages are said to be that the products of combustion are not injurious, and that by proportioning the percentage of potassic carbozoate it is possible to regulate the strength of the powder. It was proposed to manufacture ten sorts, the percentage of potassic carbozoate varying from 8 to 20 per cent. The first was said to have the same strength as ordinary gunpowder. Its manufacture was similar to that of ordinary gunpowder. We are not acquainted with what the dangers were which attended its use, nor with any results actually obtained on trial in mines with it.

A similar powder (ammoniakrut), in which, in the place of potassic carbozoate, ammoniac carbozoate is used, has been devised by the Swedish chemist Morrbin. It is a black, plastic, moist, and sticky substance, which is very difficult to bring to explosion by a flame, and most easily exploded by a blow, so that, like dynamit, its use may be considered as comparatively unattended with danger. It is said to have the advantage over dynamite that it does not become hard at low temperatures, which has, however, been contradicted, and according to experiments in the Swedish mines is said to have a much greater effect than dynamite, but of the effects of the gases melting from its explosion nothing has been reported. When it is stored for any great length of time it attracts moisture, loses its strength, and is subject to spontaneous decomposition, and after freezing, on being softened it becomes useless. These properties, unless removed, would prevent its general application to mining purposes.

GUNCOTTON.—Guncotton, or pyroxylin as it was originally called, was discovered by Schonbein, and prepared first from its solution in ether (collodion), but afterwards by treating vegetable fibres with nitric acid. The colourless material of the woody fibre of young plants, which is called "cellulose," is the compound, which by the action of nitric acid is converted into an explosive substance. Cellulose is obtained in the pure state from cotton or linen fibre, by boiling out the impurities with alkali, alcohol, ether, &c. If cotton be thrown in small portions at a time, into a mixture of equal volumes of strong sulphuric and nitric acids it does not appear to undergo any change, but on drying it is found to be very inflammable. It has, however, three atoms of the hydrogen replaced by nitric-peroxide, pyroxylin, or what is more commonly called guncotton, being the resulting product. The products of its combustion or explosion are carbonic acid, carbonic oxide, nitrous oxide, and water. It was usual at first to take guncotton which had been twisted in strings, and place it for 48 hours in concentrated nitric acid, or a mixture of nitric and sulphuric acids. After the acid had been pressed out it was placed in a stream of water for washing, in which it remained during several weeks, and then to cause its combustion so take place slowly it was treated with a dilute alkali, afterwards dried. The first great improvement in the preparation of guncotton by washing, and a later treatment with a dilute alkali is due to Lenk. During this treatment the appearance of the cotton has hardly changed whatever, though its chemical composition is so completely different, being rich in nitric-peroxide, that with access of air it explodes on ignition or by a smart blow, the temperature at which it first ignites varying between 50° and 150° centigrade, whilst gunpowder requires a temperature of 300° for ignition. Water, as is evident from the long washing it undergoes, does not change its composition or properties, but when kept for a great length of time it partially decomposes, and becomes less fit for use. According to experiments of Combes, Séquier, and others, its effect has been variously stated as four times, six times, and twice that of ordinary powder. For an equal effect it occupies less space than a charge of powder would, and requires, therefore, a shorter or a smaller bore hole.

On its first introduction guncotton possessed a great many drawbacks. Like nitroglycerine, it was dangerous whilst tamping, being liable to explosion from a sharp blow, it was liable to spontaneous decomposition if stored for any length of time, and, besides being much dearer than powder, the manufactured guncotton showed a great want of uniformity, its strength varying much, being sometimes greater sometimes less, and its effect was also too instantaneous. More lately many of these drawbacks were removed, and by mixing guncotton with cotton less or not at all explosive, or by subjecting it to compression, a more uniform mass, and a better and much more useful effect has been obtained. A great improvement in the manufacture of guncotton was the preparation of the cotton in a pulpy mass, similar to that of paper in paper manufacture, which was stirred with a little gum, and after drying was reduced to small grains. It has been extensively used at the stone quarry near Komorn, where stone for fortification work was quarried. It was made into solid cylindrical cartridges, by taking 66 grammes of cotton thread, and twisting the threads over one another, forming a cylinder 4 in. long and 2 in. in diameter. At Vienna, where it was employed for mining walls, the cartridges were made hollow by winding about 50 grammes of the cotton thread round a hollow cylinder of cardboard or cartridge paper, of 5 in. in length and ⅝ in. in diameter. The object of having a hollow cartridge was to ensure a quick and regular ignition, which is a matter of some importance with respect to guncotton. At Vienna the remarkable experience was obtained that bore holes with five pieces of hollow cartridge (each containing 50 grammes of cotton thread—*i.e.*, a charge of 250 grammes, 25 in. deep) gave the same results as six pieces of solid cartridge (each containing 66 grammes of cotton thread—*i.e.*, a charge of 400 grammes, 25 in. deep), owing, as above mentioned, to the more regular ignition of the cotton. The bore holes were made from 2 to 2¼ in. in diameter, in order to admit the cartridge with ease, with a charge of from 200 to 900 grammes; besides the first plug and 2 in. of shavings a tamping of from 6 to 18 in. in depth was found sufficient.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, Dr. Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

* Vide Morgans on "Mining Tools," p. 200. Lockwood and Co.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

A largely attended meeting of members was held at the Geologi Museum, Dudley, on Monday.—Mr. Thos. Parton, President, the chair. Mr. J. L. Gibbons, surveyor, &c., of Cannock, was unan mously elected a member. Mr. Wm. Blakemore, F.G.S., read further paper on the Faults of the South Staffordshire Coal Field.

REMARKS ON SOME OF THE CENTRAL FAULTS OF TH SOUTH STAFFORDSHIRE COAL FIELD.

As details of the faults of the South Staffordshire coal field have been so described by the late Mr. Beete Jukes in his practical and copious memoir, also Sir Roderick Murchison and Mr. Charles Twamley, F.G.S., in a very interes paper that he read before the Dudley and Midland Geological and Scien Society in 1865, it will be quite unnecessary for me to enter into a minute dese tion of the numerous faults which have made mining so difficult and expensive our locality. Having previously in my Nos. 1 and 2 papers on the Faults of South Staffordshire Coal Field given you a description of the eastern and west boundary faults, it only remains now for me to remind you of some of the pri pal faults in the interior of the district with which most of you are acquainted, to point out a few that have been discovered since Mr. Jukes's geological sur and then to add a few practical remarks that I trust will not be altogether w out interest to the Institute. The word fault is a term which originated practical miners, and has been adopted by geologists as a scientific phrase, whatever word we use as a substitute, whether it be a thing, a robble, a s swell, a roll, a dyke, a trouble, a horse-track, a knob, a jolly knob, or a boss, all have pretty much the same meaning, showing that there has been an in ference of some kind or other. I have a dictionary that gives the meaning of word fault as a puzzle, and you will no doubt agree with me that there is not that puzzles a mining engineer more than some of these faults. Let us now di our attention to some of the main faults. On reference to the southern part of coal field you will recognise the Russell's Hall fault, which commences in the at a point near Lower Gornal, and extending in an easterly direction pass the south of the Rowley Hills through Blackheath, and then curves round to south-east for Halesowen, but if I am correctly informed it terminated bef reaching this latter place. This is one of the most important faults of the dist having a downthrow to the west and south-west of between 400 ft. to 500 ft., the Brookmoor fault and the Brierley Hill Trough are all faults of consider magnitude, the course and character of which are generally known to the min engineers of that district. Proceeding towards the north we find a numbe faults both small and great, but the first of any magnitude is one that has recently discovered by Mr. Thomas Latham under the Rowley Hills, runn almost parallel with the Russell's Hall fault from east to west; to the north of fault there are a number which seem to strike out of the base of the Rowley H but which, very much unlike the other principal faults of the district, instea running from west to east their direction is just the opposite—from north to so These vary in their throw from 17 yards to 1 0 yards, some of them being cl cuts, troughs, and saddle-backs, and notably the Dudley Port trough. The Tip Green and Horseley fault runs from Tipton Green in the direction of Gold's G Works, and thence to West Bromwich, having a downthrow to the south of al 50 yards in the deepest place.

The Wednesbury Oak and Paddock, and the Balls Hills are three great fa running from east to west. Two other faults running also from east to west p ing through the Moorcroft Colliery, Lower Bradley, Hallfields, Highfields, Ca field, Spring Vale, and thence to the Fighting Cocks to the western boundary known as the Parkfield and Lanesfield fault, having a downthrow to the sout from 180 to 220 ft.

The great Bentley fault commences on the east near Rushall, running f thence in a westerly direction near the Bentley Heath Furnaces, Bentley Lo Lanehead, Pool Hayes, and Perry Hall to the Moat House, where I have reason to believe it terminates.

On the north of this fault several faults have been proved very recently, an have no doubt many others will be found within the next four or five years. S of these have not yet been made public. Another, running almost in a north south direction, passes through the Essington Lodge Colliery, with a downth to the west of 40 yards. A branch fault runs parallel with the great western fa and is a downthrow of from 50 to 80 yards to the west, and brings in several v able coal seams. The Fishley fault runs nearly due east and west from Fa through Ladywood, and thence to Wyrley Bank, having a downthrow to the so of from 15 to 50 yards. There is also a series of very peculiar faults, varying throws from 44 to 100 yards, in this interesting part of the coal field.

The Daw End and Linley fault traverses round the Silurian limestone at Wal and brings in those important coal measures to which reference has already b been made in No. 1 paper, when dealing of the Walsall Wood and Aldridge distr

It would only be wearisome to you and myself to have further detail of t faults. Most of them have been so correctly described, and are so well know the majority of those present, that nothing can be said in addition to wha already known, but I trust that we shall take care to note what new faults discovered in the northern and newer part of the coal field. There are les suggested by the study of these faults both for the practical and scientific stude

As to their origin, there may be a variety of opinions, but it does appear t that the primary cause of most of them is the presence of igneous, or green, in the district. To use a military figure, it is the most formidable enemy that mines have to contend with. It has invaded our geological territory, making headquarters at the Rowley Hills, and forming several important detachme at Barrow Hill, Powk Hill, Wednesfield, Wyrley Bank, Bloxwich, and I Bloxwich. There are points at which it can be seen, but the great body of sa and miners is underground, where they have not only partially but entirely stroyed some of our most valuable seams of coal. In fact, there is no fo mining engineer has to contend with which has produced such disastrous res Although we have not been able to discover any crater by which the rock broken through the lower measures and intruded itself into its present or imm diate position, yet I think the most feasible and reasonable opinion is that at time or other it has broken away from its original position, and relieved itself flowing in irregular masses over a very large extent of our coal field. There m have been one or more of such outlets; be that as it may, we know that it w produce mighty convulsions, dislocations, depressions, and upheavals in its gig efforts to liberate itself. And hence, in all probability, the effects which w were produced by such causes. But as there is no evil without its admixtur good, so there is every reason to suppose that but for the elevation of the measures by this basaltic deposit we should have been deprived of that rich mi area thus exposed to our view; it, therefore, behoves us to overlook the mis caused in the process, and regard the good results, not being ungrateful that have some bad coal, but thankful that we have so much good.

There is also sometimes an advantage in having a main fault running thro a mineral property as a barrier to keep back water, as in our experience we frequently found it to be so; that is provided the mines are not worked too the line of fault, so as to break and fracture it, to destroy the otherwise imper barrier. And here let me say that those principal faults that have been sele to form the boundaries of some of the districts for draining purposes have, I been so weakened or pierced that they will be ineffectual to prevent the w from flowing from one district to another. I would, therefore, advise my yo friends always to approach a "fault" with caution, as they will not only pre but give both water and gas; for we some time ago in one of our collieries dentally pierced a "fault" which yielded 25,000 cubic feet of gas in 30 min but fortunately without injury to anyone. Sometimes faults are partial, extending to one or two measures; these faults are generally produced by stre where the coal has been washed away and its placed filled up with the surro ing deposit; and sometimes a little curvature is given to an upper measure, w produces a crack or fissure, which becomes filled up with silt in a similar ma Mistakes are at times made in not observing the character and direction of fa Generally speaking in a horizontal headway if a fault is touched first near roof it will be a "downfall," if near the roof a "rise." Frequently when t has been an apparent great bulge or swell in the side of a fault, it has not bee in reality, but merely a branch out of the main fault, leaving in between the a shred of coal that well pays for getting. Sometimes a saddle or horse's will baffle a novice; under some circumstances it is best to drive through it; I have frequently found it an advantage to mount it. I came in contact with 25 years ago that was said to be a main fault, but through perseverance, altho it had previously been condemned and abandoned, on the other side we found whole complement of minerals in the Wolverhampson district, from the "B flats" upwards to the new mine coal.

A brief discussion took place, but was eventually adjourned another evening.

Mr. Alexander Smith, C.E., of Dudley, read the following pa "On the Utility of Mining Institutes":—

Mr. President and Gentlemen,—In reading this paper I have only one objec view, and that is the advancement of the interests of the South Staffordshire East Worcestershire Institute of Mining Engineers. Although some of my marks may at first impress you with the idea that I am passing a eulogium myself, and a considerable amount of condemnation upon you, in regard to connection with this Institute, yet upon consideration I think you will do me justice to acknowledge that the course I am taking is necessary to "strike moral and adorn the tale" I have to deal with. When I became your secretary nearly three years since, I had the ambition to think I could make this Institute of the leading scientific societies in the kingdom, and, in fact, I at once start and have worked hard to accomplish this end. The progress I wished and an pated has not been made, and as I think I shall presently show, it is a great owing to your want of interest and lassitude, as far as concerns the objects interests of the Institute. I am speaking now of the members as a body, there are a few exceptions to whom this remark does not apply. You must don me if I speak plainly, as I have much at stake in this matter—my reputa as conductor or secretary of the Institute, whilst you have very little. I tried my best, and you know I have repeatedly exhorted you to better thi and although there is an improvement it is not a tithe of what it ought to supposing every member properly estimated his duty and carried it out.

But now to more particularly consider the subject I have taken for the title this paper—the Utility of Mining Institutes. The utility of any institute pends, of course, upon the objects laid down for its basis or guidance, and how these objects are promoted. I shall, therefore, first show you what I consider mining institute ought to be and do; then review our position, and see how far are progressing towards the standard of excellence laid down; and, lastly, let see by what means we can attain to a complete state of efficiency as an Insti as far as the circumstances with which we are surrounded will permit. The jects of all mining institutes are about identical, and in this case we will take mines, as they most concern us, and, as given in our rules, they embrace all can be desired. Rule 1 says:—The objects of the South Staffordshire and Worcestershire Institute of Mining Engineers are to enable its members, com ing mining and mechanical engineers, and other persons connected with, or in ested in mining, to meet together at fixed periods, and to discuss the means the ventilation of coal and other mines, the mining and working of collieries mines, the prevention of accidents, and the advancement of the science of mi and engineering generally.

Now the question is, how are these objects to be attained. You may ha most elaborate set of rules, as perfect as it is possible for them to be drawn, also efficient officers; but without the co-operation of the members generally impossible that an institute can succeed in its objects and work well. Follo

rule, we find first what professions or classes of individuals the membership will embrace. The members, then, should be mining and mechanical engineers and other persons connected with or interested in mining. Everyone who finds himself a member of an institute should use every endeavour to extend its ranks and to influence all suitable persons to join. A goodly number of members promotes the interests of an Institute wonderfully; it is always a case, under these circumstances, of "the more the merrier," and there is nothing "succeeds like success." It induces the production of, and places at the disposal of, the council valuable material for rendering the meetings interesting and instructive; it also augments the funds and provides the means for advancing the sciences of mining and engineering in many ways. It behoves the members to court the admission of mechanical engineers to their ranks, as this branch has now become so intimately connected with mining, which is almost becoming a mechanical science. They are no longer the times for working bits of "pot holes," and picking out the easily wrought and best part of the coal, to be drawn to the surface by means of a gin and a horse. Now, minerals are brought from depths of hundreds of yards in large quantities, and the skill of the best mechanical engineers is brought into requisition to provide powerful, economical, and easily controlled winding engines, locomotives, traction engines for transit use on the surface; and hauling engines, air compressors, coal-cutting machines, rock-drills, &c., for work in the mine. It is the duty of mining engineers to adapt these as far as possible to the varied conditions and circumstances with which they have to contend; more than this, the Mines Regulation Act insists that all who have or shall be admitted competent members of the profession from the date of its passing shall have a sufficient amount of technical knowledge to properly adapt mechanical appliances to mining. Therefore, I say the two professions should go hand in hand, and should confer together upon equal terms in Institutes of this kind. Again, I think all persons (subject to the approval of the council) should be invited to become members who can communicate anything of value, or confer with the other members with advantage to mining science and the interests of the Institute. These ideas are what must be thoroughly carried out where an Institute is to be prosperous. To be a useful Institute there must not only be a large number of members, but they must be to a large degree men who will attend its meetings and promote its objects. The members of this Institute sign a declaration to the effect that they will advance its interests as far as shall be in their power, and will attend its meetings as often as they conveniently can. How they carry this out I will presently show. It is incumbent upon all members to consider it a duty to attend as often as convenient, and all should make an endeavour to either read a paper or bring forward some interesting matter, so that there be an inducement for a good attendance. If this is done there would be no want of material to fill up the time at the meetings, and as the meetings become important lots of valuable communications would be sent from outside, and it would really be a matter of selecting the best. All who have new ideas, or are carrying out any important work, should bring particulars before the Institute. It would be to their advantage and that of the public generally.

The old Conservative notion of keeping secret new processes or inventions, and locking them up within four walls, is well nigh exploded. No man should think he has all the brains of the universe, for the fact is we have scarcely ability enough, without the experience or assistance of others, to perfect even a small detail, and nearly all inventions that have benefited mankind have been a building up of the experience of ages. Everything would be in some way improved by wholesome criticisms and suggestions if brought before an Institute. I know an instance where an inventor doubled the effect of a machine which he considered perfect, and which had for a long time been the best for the purposes for which it had been used, after an exhibition where it had been in competition, and had excelled all others. The published "Transactions" are the best indicators of the utility of a society, or, in fact, any other institute, and they should be valuable additions to the standard technical literature of the day, and valuable works of reference to members; but this cannot be without they all further the objects. A mining engineer now must no longer be practical alone, he must know something of theory. In his training he should acquire a knowledge of chemistry, geology, mineralogy, and metallurgy, natural philosophy and mechanics, as well as the subjects he can follow practically. Who should, and can, so suitably provide the necessary and efficient classes for these theoretical subjects as the mining institutes? But it cannot be done without they are successful, and have funds at command. I also further think that the mining engineers should have regard to the training of miners, and in ways into which I am now not prepared to enter, see that they are taught to work safely and efficiently. I have now shown you, in a manner that I trust you understand, what I think an institute ought to be and do, so now let us see how near we come to the standard. [The writer then analysed the whole of the working of the Institute for several years, and showed in what respects it had come short of the standard he had laid down.]

Mr. Smith, in continuing, said: In the class way we have certainly been of great service as regards chemistry, but it would have been at less expense to the Institute had it been patronised as it ought to be. This state of things is an improvement upon what has been, but still it is very far short of the mark at which we should aim. I ask you, gentlemen, if it is my fault? You know I have badgered you at every available opportunity; I am continually writing papers myself, so that there may be something to fill up, and I am sure this should not be, as I have plenty to do without. You must pardon me if I blow a rather loud blast on my own trumpet, for I have been treated rather unfairly lately by a few, and I appeal to you whether or not I have been promoting self-interest since I have been your secretary? I have, if spending nearly the whole of my salary in expenses and giving you my time in may be considered such. No, gentlemen, I have never thought of myself when your business has been in question, and I have often come from my business hundreds of miles to attend the meetings, and have spent as much as three guineas at a time in railway fares; this very day I have been travelling from before seven to after three, over eight hours, in order to be here. With a slight increase of members in two years I have decreased your expenditure, and added to your income to the amount of more than 200*l*. Your Transactions have been duly published, and in an improved form—in fact, all that is wanted to make this one of the largest and best institutes in the kingdom, as it ought to be, as ours is the oldest and most central district, and has many other advantages, is your co-operation with the President and officials. Let us all work with a will for this object, and commence by increasing our numbers. I believe every member if he liked could induce another good one to join in 12 months, and so double our numbers. The attendance at the meetings should be larger, and not only average about 1-9th of the total number of members. We ought to have no difficulty in getting papers for the meetings; it should not be left to two or three. Members should send in communications, let them be ever so little; they may be papers, and also exhibit or present to the Institute models, plans, or drawings of any matter of interest coming under their notice. Let it also be remembered that we have started a reference library, for which we shall be glad to receive presents of scientific works. If these conditions are carried out we shall be successful, and have funds for new classes and other useful work. We ought to have a class for natural philosophy and mechanics. Above all, let us keep personal feeling and self interest outside our walls, and bear in mind that individual interest is not always that of the Institute.

A vote of thanks was accorded Mr. Smith for his paper, which was acknowledged.

FOREIGN MINING AND METALLURGY.

Attention has been a good deal occupied with a strike in the Borinage, which threatened to assume formidable proportions. This may well be the case, seeing that 20,000 men have suspended working operations, as they consider their wages insufficient, and wish to see them increased. Thus far the men on strike have failed in their object; the current selling prices do not allow coalowners to increase the wages paid, and the only result of the suspension of mining operations has been that stocks have greatly diminished. French and English coalowners appear to have profited from the situation, and have made selling offers to the detriment of the Belgian coal trade. At the last dates from the strike districts the strike appeared to have nearly terminated, and troops which had been sent out to maintain order had returned to their garrisons. On the other hand, a strike is threatened in the Charleroi basin; the number of men already on strike is estimated at about 500, but it is hoped that the strike will not become general. Prices continue low and unremunerative; there cannot be said to be any decided change in the Belgian iron trade, and, upon the whole, the winter season promises rather badly for industrial qualities of coal. As regards household descriptions, the season is not yet sufficiently advanced to allow a definite opinion to be formed. The sixty-third general meeting of the Association of Netherlands Industrials has recently been held at La Haye; it was decided, *inter alia*, that efforts should be made to promote the working of collieries in the Dutch Limbourg.

In the French coal mining districts the approach of winter has brought with it some increase of activity. Stocks have still, however, to be run off, and this is not altogether an easy matter. In proportion as stocks are exhausted, and as the season advances, prices will revive, but for the present they are very indecisive, and with some few exceptions they have not varied. It appears to be considered that English coal has been gaining ground of late upon the French markets to the displacement of Belgian coal; this has especially been the case upon the Paris market. This result is attributed to low selling prices which have been accepted, and to the fact that good, well-selected deliveries have been made. In the basins of the Nord and the Pas-de-Calais deliveries have been making some progress; choice descriptions have been the most in request; the industrial coal trade of the Nord and the Pas-de-Calais has not materially varied. In the basin of the Loire deliveries have slightly declined, but the situation has not become worse. Many fairly advantageous contracts have been concluded, and it is considered that the winter season promises well. A school of master miners is proposed to be established at Douai for the benefit of the district of the Nord. An official return which has just appeared shows that the production of coal in France in the first half of this year was 7,852,930 tons, as compared with 8,117,074 tons in the corresponding period of 1876. Lignites were raised in France to the extent of 238,629 tons in the first half of this year, as compared with 213,932 tons in the corresponding period of 1876.

The aspect of the Belgian iron trade has experienced little change. Advices only report extreme feebleness in quotations, although work is not generally absolutely wanting at the rolling mills or the mechanical construction establishments. Recent adjudications have afforded specious contingent of orders to several of the Belgian works. There is a good deal of discussion just now in Germany in respect to the relative advantages of protection and free trade. The Emperor William is said to incline to a moderate protectionist *regime*.

The French iron trade does not appear to have very much to complain of just at present. Orders arrive in a tolerably well-sustained fashion at the rolling-mills, as well in the Haute-Marne as in the North and East. Prices, however, do not improve. Merchants' iron, plates, and girders have been in some demand, but some other descriptions have, on the contrary, been rather neglected. The steelworks have their production engaged for several month in advance, thanks to some large orders which have given out by the great French railway companies. The exports of iron of various descriptions from France, as well direct as by warrant, amounted in the first eight months of this year to 113,000 tons, as compared with 139,500 tons in the corresponding period of 1876. The imports of cast-iron into France in the first eight months of this year amounted to 132,000 tons, as compared with 121,000 tons in the corresponding period of 1876. The imports of iron and plates were 35,900 tons, against 34,000 tons in the corresponding period of 1876; and the imports of steel were 3300 tons, against 3500 tons in the corresponding period of 1876.

PEAT FUEL FOR CORNISH MINE.

The efforts to utilise the immense peat deposits found in various parts of the world have been so generally unsuccessful that there is some indisposition to give fresh suggestions even a reasonable amount of consideration, although the cause of failure in most cases has been almost the same—it has been attempted to use it at too great a distance from the place of production or manufacture. The natural consequence has been that the cost of carriage or freight has consumed all, and sometimes more than all, the profit. This error has been carefully avoided in the project which has been formed for developing the invention of Mr. JOHN HOWARD, A.I.C.E., of Topsham, Devon, to which reference was made in the *Mining Journal* of June 30. He proposes to utilise the enormous peat deposits on Dartmoor, and to sell it for the locomotives of the local railways and for the mines in the neighbouring county of Cornwall. Assuming Mr. Howard's process to prove practicable when applied upon the full commercial scale, and that the fuel can really be produced at a price which he anticipates, there can be nothing to prevents its general adoption within easy reach of the works to an extent which will make his business a very prosperous one. Mr. Howard states that from the completion of a thorough personal investigation and trials of the production of the fuel he is enabled to say that the return on the capital invested for that purpose will be far greater than any other known commercial undertaking of such a sound and continuous character. These results, he adds, are certainly placed beyond the scope of speculation by the fact that the vast beds of peat are now close to a railway in the midst of localities where a large quantity of fuel is consumed, and a very long distance from places where any coal is found; added to which is the important feature that the cost of peat fuel by his process is not more than one-quarter the cost of coal.

With regard to the quantity, it is estimated that in the United Kingdom there are no less than 6,000,000 acres of peat bog, varying from 3 to 30 ft. in depth; but there are no places possessing such natural advantages for the conversion of peat as the peat grounds of Dartmoor. The peat found there is of a superior quality, and of a density hitherto unknown, and the supply almost inexhaustible, while the iron ores (hitherto valueless from their isolated position) would if fuel for smelting could be found on the spot at once become an important article of commerce. The position of the peat grounds is in the heart of the county of Devon, close to large and populous towns at present dependent for their supply of fuel from the far-distant coal fields. The railway facilities in respect to Dartmoor are exceedingly favourable, as its borders are skirted by the South Devon Railway, and within the last 15 months the London and South-Western Company have opened up a new line from Exeter to Plymouth, which passes and has stations within a short distance of the best peat ground on the moor, hitherto inaccessible. The opening of this new line of railway will cause these and other valuable products of Dartmoor to be utilised, as it opens up a market along the lines in connection with it, and provides easy access for shipment, thus offering great facilities for the financial success of converting peat into a valuable and commercial fuel. There is sufficient peat on Dartmoor (of the high class so essential) to produce 90,000 tons per annum of peat coal or charcoal for 500 years, while its removal would confer a lasting boon to the West of England by removing the difficulty which forms the greatest obstacle to the successful cultivation of the moor.

Already the preliminary steps are being taken to ensure an easy means of transport for the manufactured peat fuel by arranging for the construction of a suitable tramway; and it appears that the proposed route for a tramway from the peat ground on Dartmoor to Bridestowe Station, on the London and South-Western Railway, was inspected last week by Mr. W. Jacomb, chief engineer of that company, assisted by Mr. B. J. Fisher, district engineer, accompanied by Mr. J. Howard and several others. The shareholders of the above railway may certainly congratulate themselves on the prospect of having a branch line into almost inexhaustible coal fields, which branch, on its completion, would not only send a large traffic over their system, but would, no doubt, place within the reach of their company the means of effecting an immense saving in the cost of fuel; and the proposed tramway is important from the fact that it would give the company an ample supply of peat fuel, and as this is free from sulphur it must of necessity follow that the decrease in the cost of maintaining their locomotives would form a large item.

To the Cornish miners the great interest in peat would arise from its value as a steam fuel, and that it is applicable for this purpose Mr. Howard shows by quoting the opinion of the engineers of the Belfast and Northern Railway of Ireland, who report "the average peat fuel used per mile in experimental trials to be 21 lbs., whilst the average weight of coal used (mixture of two parts Welsh and one of Scotch) was 25 lbs. per mile in three months. In another month the average was 26 lbs. of coal per mile. Thus the practical result was that 21 lbs. of peat raised steam for a mile of running, while it took 26 lbs. of coal to do the same work." This was considered highly satisfactory in favour of peat. Great tests have also been made as to the practicabilities of making gas from peat. Mr. Leon Foucault finds peat gas to possess nearly 3½ times the illuminating power of coal gas, and the late Dr. Letheby reporting generally upon the value of peat described the results obtained as highly satisfactory, indicating that a large percentage of valuable products may be obtained from peat. The gas from this material (14,000 cubic feet to 1 ton) was found to be entirely free from sulphur, and in this respect it has a great advantage over coal gas, for the products of combustion are wholly harmless in respect of their action on inorganic matter, such as books, drapery, and other perishable fabrics. In the use of peat fuel there is no opaque smoke evolved; no sulphuric acid set free. The heat is quickly raised, and quickly diffused; the ashes never clinker so as to choke the bars of the furnace, and the peat does not contain metallic sulphur or other substance that is likely to produce spontaneous combustion. When the details of the process are made known a better opinion can be formed as to the probability of its proving successful, but in the meantime Mr. Howard states that the fact that there are millions of tons of the fuel close by where it is required for consumption, that the cost is but a few shillings per ton, and that its capabilities as a fuel are so favourable places beyond doubt the value of such a commercial undertaking as this.

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports of coals into the port and district of London by sea, railway, and canal during September:—

By sea.	Ships.	Tons.	By Railway and Canal.	Tons	c.
Newcastle	171	137,400	London & North-Western	119,340	4
Seaham	33	17,926	Great Northern	73,301	0
Sunderland	88	62,642	Great Western	81,779	9
Middlesborough	3	1,173	Midland	150,171	0
Hartlepool	77	26,752	Great Eastern	46,304	18
Scotch	3	730	South-Eastern	1,124	15
Welsh	5	1,439	Grand Junction Canal	450	10
Yorkshire	26	1,993			
Small coal	8	2,067			
Cinders	2	167			
Total	416	252,289	Total	472,471	1[illegible]
Imports—Sept., 1876	448	252,608	Imports during Sept., 1876	466,317	0

Comparative Statement, 1876 *and* 1877.

By Sea.	Ships.	Tons.	By Railway and Canal.	Tons.	c.
Jan. 1 to Sept. 30, 1876	4098	2,340,750	Jan. 1 to Sept. 30, 1877	3,863,978	0
Jan. 1 to Sept. 30, 1877	3861	2,224,935	Jan. 1 to Sept. 30, 1876	3,728,226	0
Decrease—1877	237	115,815	Increase—1877	135,752	0

Mr. J. R. Scott has also published an export list, showing the distribution of coal imported into the port or district of London by sea, rail, and canal, and afterwards exported coastwise or to foreign parts, or sent beyond limits of London district by rail or inland navigation during September:—

Railway-borne coal passing *in transitu* through district ....Tons		84,335
Sea-borne coal exported to British possessions, or to foreign parts, or to the coast ....Tons	30,843	
Ditto, sent beyond limits by railway	7,697	
Ditto, by canal and inland navigation	1,935=	40,475
Railway-borne coal exported to British possessions, or to foreign parts, or the coast	33,052	
Ditto, by rail beyond district	49	
Ditto, by canal and inland navigation	34=	33,135
Sea-borne coal brought into port and exported in same ships		187
Total quantity of coal conveyed beyond limits of coal duty district during September, 1877		158,132
Ditto, September, 1876		163,115

Comparative Statement, 1876 *and* 1877.

Total distribution of coal from January 1 to Sept. 30, 1876	1,409,564
Ditto, January 1 to Sept. 30, 1877	1,397,419
Decrease in the present year	12,145

General Statement.

Increase in coals imported by railway and canal during the present year	135,752	
Less decrease by sea	115,815=	19,937
Add decrease in coals exported		12,145
Total increase in trade within London district during present year		32,082

THE COPPER TRADE.

Stocks in Europe:—	Tons.	
Chili ores and regulus, Liverpool & Swansea (equal to fine)	4,521	
Chili bars in Liverpool	11,574	
Ditto Swansea	2,532	
Chili ingots in Liverpool	—	
Ditto Swansea	—	
Foreign copper (chiefly Australian) in London	4,252	
Ditto ditto landing	370	
English copper in London	50	
Chili bars and ingots and Barilla in Havre	7,622	
Other copper in Havre	450	= 31,371
Afloat and chartered from Chili to Europe (advised by mail):—		
Ores and regulus (equal to fine)	2,051	
Bars and ingots	2,101	= 4,152
Afloat from Australia (advised by mail):—		
Fine copper		1,200
Afloat and chartered from Chili to Europe (advised by cable):—		
Fine copper		3,800
Total ....Tons		40,523

Price of bars, 65*l*. 10*s*.; Wallaroo, 80*l*.; English tough, 72*l*.

Leadenhall-street, Oct. 1. HENRY R. MERTON AND CO.

Arrivals here during the fortnight of West Coast, S. A., produce—Valparaiso, from Valparaisso, 650 tons bars and 130 tons ingots. At Swansea, *nil*. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1223	2084	11,574	—	—
Swansea	2584	6254	2,532	—	10
Total	3807	8338	14,106	—	10

Representing about 18,627 tons fine copper, against 18,980 tons Sept. 15; 14,107 tons Sept. 30, 1876; 13,206 tons Sept. 30, 1875; 15,500 tons Sept. 30, 1874. Stock of Chili copper in Havre, 7570 tons fine, against 6555 tons Sept. 30, 1876; stock of Chili copper afloat and chartered for to date, 8500 tons fine, against 11,200 tons Sept. 30, 1876; stock of foreign copper in London, chiefly Australian, 4193 tons fine, against 3906 tons Sept. 30, 1876.—*Liverpool, Sept.* 29. HARRINGTON, HORAN, AND CO.

Smelters having been able to supply themselves with furnace stuff at favourable rates, there was less demand for Chili bars, and holders of the latter were forced to lower their pretensions to make business. Values of Australian ruled steady throughout the past month, but being held for comparatively high rates, transactions were small. Charters from the West Coast for first fortnight of September were advised as 1900 tons—750 tons in bars for England and 1150 tons bars for the Continent. We quote Chili bars 66*l*.; Wallaroo 80*l*.; Burra 74*l*.; tough 72*l*.; manufactured 77*l*. to 78*l*.; ore 11*s*. 9*d*. per unit. The imports and exports for eight months, January to August, were, by the returns of the Board of Trade—

IMPORTS.	1877.	1876.	1875.
Ore ....Tons	71,596	47,166	34,455
Regulus	24,741	22,008	23,129
Copper	28,944	25,438	28,353
EXPORTS.			
Foreign raw	9,700	11,188	10,006
English raw	6,924	7,808	6,924
Manufactured, including yellow metal and brass	19,253	15,020	16,650

London, Oct. 4. FRENCH AND SMITH.

THE TIN TRADE.

Tin has ruled very quiet all this month, consumers having amply satisfied their wants during August. Prices show little or no change from our last quotations. The Dutch Trading Company's fifth sale in 1877 took place here on Wednesday last, when 21,635 slabs Banca were sold at from 40⅜ fl. to 40⅝ fl., average 40·30 fl.; and 3499 slabs Billiton fetched 38¾ fl. This year's last sale will be held towards the end of November. Banca has been in limited request, the price ruling between 40⅜ fl. and 40⅛ fl. Contracts for delivery, *ex* September sale, changed hands from 40 fl. to 40⅛ fl. Since the sale there are buyers at 40⅛ fl. Billiton sold readily at 38⅝ fl., the majority of holders, however, asking 38¾ fl. This price is now vainly bid, and 38¾ fl. our closing quotation. On Monday, Oct. 8, a public sale comprising 10,000 peculs Billiton will take place at Batavia. The position of Banca tin in Holland on Sept. 28, according to the official returns of the Dutch Trading Company, was—

	1877.	1876.	1875.
Import in September ....Slabs	3,048	10,623	11,024
Total nine months	118,297	83,303	66,937
Deliveries in September	7,590	13,091	4,800
Total nine months	101,160	94,966	98,904
Stock second-hand	43,335	41,567	30,429
Unsold stock	27,673	38,673	72,821
Total stock	71,008	80,240	103,250
Afloat ....Peculs	300	3,600	9,950
Statement of Billiton:—			
Import in September ....Slabs	2,950	2,400	10,540
Total nine months	89,694	73,879	66,742
Deliveries in September	6,060	7,581	4,965
Total nine months	65,252	72,058	65,410
Stock	46,061	31,500	32,938
Afloat ....Peculs	12,000	12,000	12,000
Quotation Sept. 29. Banca	40½ fl.	42½ fl.	53 fl.
Quotation Sept. 29. Billiton	39	42	51

These combined returns of Banca and Billiton for 1877, compared with those for 1876, exhibit—A decrease of the import for September of 220 tons; an increase of the import for the nine months of 1306 tons; a decrease of the deliveries for September of 219 tons; a decrease of the deliveries for the nine months of 19 tons; an increase of the stock second hand of 510 tons; a decrease of the unsold stock of 344 tons; an increase of the total stock of 166 tons; a decline of the quotation of Banca of 3*l*. 6*s*. per ton. The Government returns for the month of July are:—

EXPORT OF TIN FROM HOLLAND.

	July. 1877.	July. 1876.	July. 1875.	Seven months. 1877.	Seven months. 1876.	Seven months. 1875.
Germany ....Tons	308	290	371	1873	1922	2415
England	112	9	53	291	38	386
Belgium	49	245	165	973	1185	1005
France	63	69	28	414	325	256
Hamburg	53	22	28	244	218	239
United States	—	17	—	55	34	33
Other countries	28	64	40	288	254	385
Total	613	716	685	4138	3976	4719

Rotterdam, Sept. 29. EBELING AND HAVELAAR.

Values were fully maintained during the past month, with an improved demand. China has again been the chief buyer in the Straits, the shipments to Europe being only about 30 tons. Telegraphic communication with Australia is broken, therefore the correct shipments are unknown, but in a tele-

gram received the day before the interruption the quantity was estimated at 520 tons. These moderate shipments and a good demand have caused very considerable reduction in the total visible supplies, and holders have not neglected this favourable opportunity of pushing prices higher. We quote to-day Straits and Australian, 66l. 10s. On the 26th ult. the Dutch Trading Company sold 21,635 slabs Banca at 40¼ fl. to 40½ fl., average 40 30 fl., and 3499 slabs Billiton at 38¾ fl. to 39 fl. English is in improved demand. Below we give our usual statistics –

	1877. Sept. 1.	1877. Oct. 1.	1876. Oct. 1.	1875. Oct. 1.
Foreign in London ....Tons	10,074	9,271	7,969	5,595
Banca in Holland	915	1,353	1,299	950
Billiton in Holland	1,500	1,439	984	1,030
Afloat for Europe, Straits, advised by mail and wire	—	50	600	1,250
Afloat, Australian ditto	1,850	2,100	1,660	1,150
Afloat, Billiton	800	800	750	720
Banca in Trading Company's hands	1,445	864	1208	2,275
Banca afloat, by sailing vessels	70	20	219	600
Total	16,654	15,897	14,689	13,570

Oct. 4. FRENCH AND SMITH.

	Aug. 31, 1877.	Sept. 30, 1877.	Sept. 30, 1876.	Sept. 30, 1875.
Straits and Australian, spot ...Tons	8,781	9,031	7,540	5,363
Ditto, landing	1,309	238	372	232
Straits afloat	—	55	660	1,140
Australian, afloat	1,788	2,200	1,700	1,269
Banca, on warrants	915	1,387	1,299	235
Ditto, Trading Co.'s hands.	1,446	889	1,170	2,992
Ditto, afloat (by sailing vessels only)	69	19	218	622
Billiton, spot	1,502	1,448	951	919
Ditto, afloat	1,000	800	1,000	1,000
Australian tin in Holland	700	577	795	—
Total ....Tons	17,510	16,694	15,705	13,772
Deliveries during the month in London	793	996	749	1,193
Ditto, Holland	801	478	610	317
Total ....Tons	1,594	1,474*	1,359	1,510

* Also 123 tons overside to America.

Prices of Straits ..... £65 ..... £66 ..... £72 ..... £86

Shipments from Straits, in September .....Tons 35

Ditto, Australia, ditto ..... 700 estimated.

	12 months ending Sept. 31, 1877.	During first 9 months, '77.	During first 9 months, '76.
Shipments from Straits to London..Tons	3,350	2,485	4,736
Shipments from Australia to London	8,207	6,625	5,046
Deliveries of foreign tin in London	10,551	7,848	8,802

London, Oct. 1. A. STRAUSS AND CO.

THE IRON AND STEEL INSTITUTE—EXCURSIONS.

THE THARSIS COPPER EXTRACTING WORKS.

These works are situated at Hebburn-on-Tyne, and cover an area of about 23 acres. They belong to the Tharsis Sulphur and Copper Company, whose head quarters are at Glasgow. They constitute one of the six large extracting works erected for the purpose of dealing with the residues of the pyrites which the company import from Spain. These pyrites consist of sulphur and iron with copper, and small quantities of other metals. They are first supplied to the alkali and manure makers, who burn off the sulphur, converting it into sulphuric acid. It is after this has been done that the residues, consisting principally of peroxide of iron with copper, are operated on in the works under notice. The *modus operandi* is briefly as follows:—The ore is mixed with rock-salt and ground to a suitable size; from the grinding mill it passes over the top of the calcining furnace, into which it is tipped, and is subjected to a low red-heat until the copper has been thereby converted into a soluble form. The escaping gases are conducted into condensers; the ore is conveyed by means of convenient tramways passing along the furnaces to the washing tanks; water is first employed, then acids from the condensers, and the process is continued until the copper has been extracted from the ore. The residue, consisting of peroxide of iron, is then removed and sold to the producers of pig and wrought iron. The liquors obtained by the washing are conducted through canals running along the tanks to other tanks filled with scrap iron, where the process of precipitating the copper is effected. The copper is deposited in fine particles on the iron, and as this latter gets dissolved the former gradually fills the tank. It is then removed and taken to a place where it is washed, so as to separate any remaining pieces of iron, which are returned to the precipitating tanks, while the precipitate itself is thereby divided into several classes. The precipitate, after having been thus separted, is conveyed to the refinery, where, by a series of roastings and meltings, it becomes free from impurity, and is cast into the various shapes required by the manufacturer—such as ingots, bars, and cakes. The works afford employment for 400 men, while 24 engines, eight large and 16 donkey engines, of an aggregate of 250-horse power, are used. The annual production of purple ore is 50,000 tons, the quantity of burnt ore treated to produce this being 51,282 tons. The annual production of copper is 5000 tons. The company own a similar, but somewhat smaller, establishment in the neighbourhood, at Willington, where they employ 184 men, use engines of 70 aggregate horse-powder, and six donkey engines; produce 21,400 tons of purple ore annually and from 21,984 tons of burnt of ore; the annual yield of copper being 1784 tons. The total annual yield of the two works is thus 6784 tons.

THE GATESHEAD IRONWORKS.

These works, which are the property of Messrs. Hawks, Crawshay and Sons, were established by Mr. William Hawks, in 1748. They were at first, like many other industrial establishments in this country, in a very small way of business. Their operations were confined to one small shop, and consisted exclusively of black ironmongery; but from time to time they were enlarged to meet the requirements of the times. When iron chain cables were first brought into use for sailing ships by the inventor, Capt. Brown, R.N., this firm was one of the first to engage in their manufacture, and from that time until the present the manufacture of chains and anchors has been carried on with great energy. So great has been the success of this department of the works that the Lords of the Admiralty were induced a few years ago to contract with Messrs Hawks, Crawshay, and Sons for the chains required for the British Navy, and the quality of goods supplied has given the most unqualified satisfaction. When the late Mr. Nasmyth brought out his patent steam-hammer, the Gateshead Ironworks were the first in the North of England to adopt it; and when rolling-mills were few and far between, a small mill might have been seen at the Gateshead Ironworks turning out its "fiery serpents," which were then looked upon as a curiosity. The old mill, which was of very limited proportions, was replaced many years ago by others of much larger dimensions, capable of producing upwards of 400 tons of finished iron weekly, and having 48 furnaces. About 12 years ago the present proprietors put down a mill for making boiler-plates, with 44 furnaces, and capable of producing about 200 tons of plates weekly. The engineering works undertaken by this firm have been both varied and extensive. They were the first, and for a considerable time the only makers of engines for tug boats in this district—having commenced in the year 1821; and many of the largest colliery pumping engines were also designed and manufactured at the Gateshead works. About 30 years ago the present proprietors, Messrs. George and Edmond Crawshay, joined the works. The first contract of any importance entered into after this was the magnificent High Level Bridge, which spans the Tyne between Newcastle and Gateshead, and stands as a monument of the engineering skill and ingenuity of the designer, the late Mr Robert Stephenson, and also of the engineering firm who carried out the contract with so much energy and success. As it will yet be some time before this great work ceases to be ranked amongst the marvels which human industry has accomplished, we may mention a few particulars which at the present time may be interesting. This contract was fulfilled within a period of three years, although in strength and durability the erection may compare with any of those mighty buildings which in former times were the work almost of centuries: 5550 tons of iron were used in its construction, of which 5053 tons were cast and the remainder wrought. The bridge is 112 ft. 6 in. from high-water mark to the upper parapet. It consists of six arches of 125 ft. span each, and two approaches formed of cast-iron pillars and bearers in keeping with the arches. The total length of the viaduct is 1375 ft. The double roadways are a novel and striking feature in this structure. The upper platform, which serves as a roof for the lower, is appropriated as part of the line of the North-Eastern Railway Company, and the lower platform is a bridge for ordinary traffic. Since that time the engineering department has been very much extended, and large contracts carried out for wrought-iron bridges, screw pile piers, jetties, and lighthouses, in India, Australia, China, South America, Japan, Batavia, &c. On the Poti and Tiflis Railway alone upwards of 100 bridges were erected. A large portion of the above were made to the order of Mr. George Wells, C.E., North-street, Westminster, who succeeded to the business of the late Mr. Mitchell, the inventor and patentee of the "screw"—an invention which is comparatively little known, in comparison with numerous important works which have owed their existence to this simple but ingenious contrivance, and which could not have been erected upon any other principle. Messrs. Hawks, Crawshay, and Sons have also manufactured and erected pumping-engines for waterworks, at Hull, Scarborough, Nottingham, Darlington, Altona, &c., and also a large number of surface condensing marine engines on board ships. They have just shipped a large bridge for the South Australian Government, and have in hand two drawbridges for the Hull Dock Company; marine engines of 180 and 200-horse-power, besides two large pumping-engines and boilers for the York Waterworks Company, to the design of Messrs. T. and C. Hawksley. They are also commencing to make and put on board ship a pair of marine engines, on the Perkin's system, to work up to a pressure of 400 lbs. per square inch. The last bridge erected by this firm in the neighbourhood was for the Scotswood and Wylam Railway Company, across the Tyne, where their system joins the Carlisle line, and was of unique design. The bridge has a double line of rails, and consists of one span of 240 ft. in the clear. The total weight of iron is only 310 tons. It was subjected last year by Colonel Hutchinson, of the Board of Trade, to the most severe tests ever put upon this class of structure. The tests were considered highly satisfactory, and the contractors were much commended for the manner in which the work had been carried out. The number of men employed at the Gateshead Ironworks is about 2500.

THE ELSWICK WORKS.

Of the various places of note visited by the members of the Iron and Steel Institute during their annual meeting, the chief in interest and extent undoubtedly were the Ordnance and Engineering Works of Sir William Armstrong. The establishment at Elswick has attained a world-wide reputation as much for the construction of appliances for the promotion of commercial industry and social welfare as the manufacture of destructive implements of war. A description of the rise and progress of these works, indeed, would form a most interesting volume in the brilliant history of successful English enterprise. Such a description is, of course, beyond the scope of this article, but we may briefly epitomise a few facts in reference to the past and present position of the works which cannot fail to prove of interest. The works were commenced in 1847, and occupied but a comparatively small space of ground, about the middle of the present extensive range of buildings. From that time for some years the progress of the place is a history of the introduction of hydraulic machinery into common use in various branches of industry. The application of water-pressure as a motive power for machinery, like every new truth in embryo, met with a very cold reception, slight encouragement, and some amount of dogged opposition. In time, however, as the value of the inventor's suggestion became too patent to be rejected, the project was taken up, and as warmly welcomed as it had been previously coolly received. It was found that as an effective and inexpensive motor for lifting heavy weights or exerting stupendous power water had enormous advantages over other known forces, and it was soon called into use for working the machinery of warehouses, docks, and railway stations. As each succeeding year brought about some improvement in the method of applying the power, so its area of usefulness extended, and the Elswick works extended in proportion. In 1858 the Ordnance department was added, and this gave a further need for extensions. One addition after another has followed until the present proportions of the establishment were reached. At present the Elswick factory has a river frontage of over one mile in length, whilst the various fitting, erecting, and finishing shops, foundries, forges, and blast-furnaces extend in an almost unbroken line—for the greater distance, in fact, a double line—nearly the whole of that space. The number of men employed in the works when in full operation is, we believe, nearly 4000, while in 1850 or 1851 it did not exceed 300.

Probably the most interesting feature in the Elswick Works is the wonderful arrangement of the works themselves. The ingenious labour saying contrivances which meet the eye at every turn are only equalled in interest by the admirable manner in which the various departments have been designed to suit their special requirements. Had the works been originally planned and designed for their present dimensions instead of growing in size from time to time it is hardly possible to conceive that the arrangements could have been more perfect. The proximity of the river and the North-Eastern system to the works has been of great use to the proprietors, who have duly taken advantage of it. A complete network of rails traverses the works from end to end, and by means of small tank locomotives, or hydraulic capstans, heavy machinery and guns in the course of construction can be transported from one portion of the building to another with as much facility as one may move the pieces upon a chess-board. Two jetties run out into the river, and at each of these the water-pressure system enables a single workman by the aid of hydraulic cranes to do the work of a great number with the most perfect ease. One of these jetties is used for transferring heavy ordnance to the holds of vessels, and upon this is erected the hydraulic sheers capable of lifting the 100-ton guns.

It was impossible for the members of the Institute who visited the works to minutely inspect the whole of them in the time devoted to the excursion, and arrangements, therefore, were made whereby visitors might witness the principal features, especially in connection with the construction of the famous 100-ton guns. A special train from the central station conveyed the members into the centre of the works, so that on alighting they were enabled to commence the inspection without loss of time. They were first shown the main coil, placed and shrunk upon one of the large guns, constructed for the Italian Government. This gun is the third of a series of eight 100-ton guns which will be turned out at Elswick. The manufacture of these guns is exceedingly interesting, as it is an unparallelled feat of artillery engineering. The Government Arsenal, at Woolwich, has recently turned out an 81-ton cannon, and the construction of the precocious "infant" was watched not only at home but abroad with the keenest interest. Every stage of its growth was recorded; the implements used in "rearing" it were described with minutest detail, and illustrations were published showing the various operations. While the world had its eyes turned to Woolwich and its 81-ton gun Elswick quietly constructed an "infant" of 100 tons, brought it to perfection, and shipped it to Italy, and made no fuss about it whatever. The maturing of the remaining portion of the "family infants" is proceeding in an equally unostentatious manner. The process of making these terrible arms was shown *in extenso*, though, owing to the exigencies of manufacture, the members witnessed the later stages first. The guns consist of a long tube surrounded by a succession of coils, known in the works as the "clothing," which increase in number near the breech until the implement has somewhat the appearance of a gigantic sodawater bottle. The tube is first forged in solid shaft, and then bored by powerful machinery. The coils are constructed from long bars of specially prepared iron, and placed upon the tube, into the end of which, the breech, a solid plug is screwed. The process first to be witnessed was, as already stated, the shrinking of the main coil on to one of the guns. The weapon is placed perpendicularly in a specially prepared pit, with one end projecting some feet above the level of the ground. The coil, when sufficiently heated, is placed upon an iron truck and conveyed from the furnace. It is then hoisted by a crane and lowered to its proper position upon the gun, where it is shrunk upon it like a tyre.

After seeing this coil put on the party proceeded to an adjoining forge, where they were shown the process of making a similar coil for another gun. The coils are made from bars of iron ranging from 150 to 170 ft. in length, and weighing something like 28 tons. The process of making these bars was also seen. The bars are heated in a long narrow furnace by means of gas. When the bar is sufficiently heated, one end is fixed upon a roller or barrel, and simply wound up like a watch chain. The roller is then lifted by means of a crane, and suspended perpendicularly over a pit, so as to allow the coil to slip off. The next process is that of welding the coil, and for that purpose it is bowled away to another forge and placed in a gigantic furnace. When it is hot it is again brought out and subjected to the battering of an enormous steam hammer—the largest hammer, we believe, in the world. This has the effect of welding the thread of the coil together, and making the whole piece solid and strong.

The forge in which this operation took place proved a most attractive feature to the visitors. Everything in it is upon a gigantic scale. The great hammer stands unrivalled. Something like 120 tons of iron are buried in the ground to form the anvil. The head or block weighs 30 tons, and steam at a pressure of 50 lbs. per inch can be applied to assist the blows. The stroke is 12 ft. 6 in. It is entirely under the control of one man, who, by exerting as much power as he would require to depress the key of a piano, can strike the heated coil a terrific blow sufficient to crush it, or pat it as gently as he would pat the back of a favourite dog. There are two furnaces for the hammer, with doors, made of brick and iron, nearly as large as the side of a labourer's cottage, and the tongs used for pulling out the coils would reach across Grey-street. The furnaces, we may state, are—like the whole of those used in the Elswick works—constructed upon Siemens' regenerative principle. The coils are moved from the furnaces to the anvil by means of powerful hydraulic cranes. There are four of these cranes, and the whole of them are under the command of one man, who can swing them right or left, or move the load up or down, just as he pleases, without moving from his post. From this forge the party was conducted to witness the method of firing Gatling guns. These interesting implements, like torpedoes, may be described as the labour-saving machines of modern warfare.

They consist of ten rifle barrels fixed side by side in a circular framework, and mounted on a light carriage. The process of loading and firing is carried out by a very ingenious contrivance, the operator simply having to turn a handle. At a fairly moderate rate of speed 500 shots per minute may be fired at an advancing foe, but with a little extra exertion upon the handle it is possible to double that number. The party was next conducted over the carriage shop, where the gun carriages are made. Four hydraulic carriages for Her Majesty's ship Inflexible, and others for the 100-ton guns, were here seen in course of construction. From this shop the visitors proceeded to the ammunition department, where they witnessed the process of making shot and shells for the ordnance, and amongst others some projectiles for the large Italian guns. These missiles weigh 2000 lbs., or close upon 1 ton each, the charge of powder required to propel them being something like 440 lbs. The 100-ton gun with this charge is, we believe, capable of developing a *vis viva* of between 35,000 and 36,000-ft. tons. The visitor next had an opportunity of inspecting the foundry, and the gigantic castings which are being turned out. In this department there are some splendid cranes, so arranged that a load can be transferred from one to the other and conveyed all round the building, if necessary, by the simple process of adjusting a few levers. These cranes, and the whole of the hydraulic machinery in the works, in fact, are connected with one system.

The party was now taken by an engine down to the river side to inspect the hydraulic sheers erected upon the jetty. This shears is the largest in existence, and is capable of lifting a weight of 120 tons. A peculiar feature in it is the direct-acting piston, which takes the place of the ordinary chain. By means of this perfect steadiness is gained, and greater safety is insured than with the chain, where one faulty weld would spoil all. The operation of lifting a heavy weight was shown, and visitors had an opportunity of observing the wonderful simplicity by which the powerful piece of mechanism can be put in motion. A Swedish gunboat at present lies off the jetty, whilst she is being fitted with hydraulic machinery for working her guns. A visit to the finishing and machine shops brought the inspection of the ordnance department to a close. Here the processes of boring and rifling the tubes of the guns, planing the external parts, cutting the breech-screws, and giving the finishing touches to the weapons previously to shipping them, take place. Not the least interesting feature in this department is the gigantic lathe for turning the 100-ton guns, probably the largest lathe ever made.

The further progress of the party was amidst weapons of peace. The first department visited was that in which the heavy girders and ironwork are constructed. It was here that the new swing bridge across the Tyne was made, and the bridge being erected across Jesmond Dene is still in course of construction. Passing thence on to the jetty, visitors had an opportunity of seeing the movable hydraulic crane constructed for railways and quays. The difficulty of making a hydraulic crane which might be moved from point to point has been overcome in the construction of this ingenious contrivance, by means of an adjusting feed-pipe, and the crane may be used with as much facility as the ordinary steam travelling crane. Passing next to the erecting shop, the visitors were shown the construction of hydraulic engines of different kinds in various stages of manufacture, amongst others, one of the engines, for the Duilio for revolving her turret. There are also several other interesting shops in this department which were open to inspection, and in one of them the operation of the hydraulic sq[ueezer] was shown.

The hydraulic squeezer has been constructed for the purpose of carryin[g] Siemens' puddling process with Danks' furnaces, and attracts much atte[n]tion. This admirable machine has been invented to meet a difficulty experienced in [han]dling with the bloom or ball of iron when it leaves the furnace. It combines [the] power of a squeezer with those of the steam-hammer. It may be compared [to a] powerful steam-hammer set horizontally instead of perpendicularly, by w[hich] force is exerted in the form of a resistless steady pressure instead of a sudden [blow]. The bloom is conveyed direct from the furnace to what may be termed the [mouth] the squeezer by means of a sliding carriage moved by hydraulic power. At [one] side of this floor stands an immense square block of iron. One side is stati[onary] and may be compared to the anvil; the other side is moveable backwards [and] wards, and may be compared to the head of the hammer. When the [bloom] which will measure (say) 5 feet by 2 feet 6 inches, has been conveyed whi[le hot] from the furnace, and deposited upon the floor before mentioned, the m[oveable] block of iron is immediately made to move forward. It soon comes in c[ontact] with the heated iron, and pushes it along. The iron coming in contact w[ith the] stationary block is thus caught between the two sides and squeezed. At t[his] ment the pressure takes place a square iron trap in the floor underneath the [bloom] opens downwards, and the dross squeezed out falls into a carriage beneath. [The] trap returns to its place, and at that moment the moveable block relinquis[hes the] squeeze, and begins to travel back. The iron trap then opens again, but this [time] it opens upwards, and catching the ball tilts it up and turns it over. The [moveable] able head now returns to the charge, and puts forth another squeeze, retre[ats] after the operation.

The next process is to turn the metal again. It has been turned over; it requires to be turned round. The machine is prepared for the emergency. [A disc] pended over the floor, but out of the drift of the sliding-block, is an inverte[d hy]draulic ram. To the end of this is attached a horizontal disc full of hol[es] which are fitted some half-dozen or more thick iron pins. These pins hang [with] their points downwards, and are supported by their heads. To turn the [ball] or bloom, the ram, and the disc are lowered upon it, and a rotary moti[on] then imparted. The ball is caught by the pins, and slewed round to the [re]quired extent. This done, the disc and pins ascend to make room for the [mov]able squeezer, which, coming forward, again repeats the dose. This proc[ess] repeated again as often as required, the ball being either thrown over by the [iron] trap beneath, or slewed roand by the pins of the suspended disc. The pins [of the] disc are fitted loosely in their sockets, so that those which touch upon the [sides of] the bloom in the descent slide up instead of sticking in to the iron. The [ram] has a stroke of 6 ft. 6 in., and the cylinder in which it moves weighs 23 [tons] is capable of giving a squeeze of no less than 750 tons, which may be consid[ered] tolerably warm embrace. In order to economies power, a small auxiliary cy[linder] is provided. This merely overcomes the *vis inertiæ* of the block of iron itself, carries it forward to the point of contact with the bloom, when the big cy[linder] comes into operation, and exerting its gigantic power performs the necessary squeeze. All the motions of the squeezer, as well as the iron carrier, are w[orked] by hydraulic power, and are under the control of one man. In order to show the operation of the machine, a block of lead was used to represent the [bloom].

An inspection of the Elswick Works would not be complete without a gla[nce at] the magnificent engines by which motive power is given to the various engi[neering] ing shops. There are three Corliss engines of about 175 indicated horse [power] each. The belting, which is of extraordinary width, is carried underground [to] the various shops. The boilers to supply the engines are all multitubular, [and] fitted with Duke's patent revolving furnaces.

WATSON BROTHERS' MINING CIRCULA[R]

Ten years ago the weekly information which had previously [been] published for a great number of years in WATSON BROTHERS' Mi[ning] Circular was transferred to the columns of the *Mining Journal*, [with] the following announcement; which is now reproduced in co[n]sequence of the numerous letters and enquiries handed to them o[n] in reply to one which appeared in the Journal on the Clemen[s] Mine.

The great extension of mining business, the difficulty so often complai[ned] by country shareholders in getting accurate and disinterested information [on] the state of Cornish and Foreign Mines, and of the financial and real posi[tion] mining companies generally, have induced Messrs. WATSON BROTHERS to [extend] their Circular now published in the *Mining Journal* more extensively known [and] to state—

That they issue daily to clients and others who apply for it a Price List (s[ame] plied to most of the London and country papers), giving the closing pri[ces] Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fort[nightly] settlement in all Mines dealt in on the Mining and Stock Exchanges, at the [best] market prices of the day, free of all charges for commission. They deal [also] the same terms, in the Public Funds, Railways, Telegraphs, and all other [secu]rities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting [reports] Inspected for their own guidance, and will also obtain special reports of any [par]ticular mine for their clients, for the inspecting agent's fee of £2 2s.

In the year 1843, when mining was almost unknown to the general [public] attention was first called to its advantages, when properly conducted, [by] "Compendium of British Mining," commenced in 1837, and published in [parts] by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Mi[ning]," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "C[ornish] Notes" (second series, 1863), "The Progress of Mining," with Statistics [of] Mining Interest, annually for 21 years, &c., &c. In the Compendium, pub[lished] in 1843, Mr. WATSON was the first to recommend the system of a "divi[sion] small risks in several mines, ensuring the success in the aggregate," and M[essrs.] WATSON BROTHERS have always a selected list on hand. Perhaps at no [other] period in the annals of mining has there been more peculiar need of hones[t] experienced advice in regard to mines and sharedealing than there is at pr[esent], and from the lengthened experience of Messrs. WATSON BROTHERS they [are] emboldened to offer, thus publicly, their best services and advice to all con[nected] with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of part[icular] mines, as well as to *recommend* mines to invest or speculate in, and they [give] their advice and recommend mines to the best of their judgment and [belief] founded on the best practical advice they can obtain from the mining di[rectors] but they will not be held responsible, nor subject to blame, if results [do not] always equal the expectations they may have held out in a property so fluct[uating] as mining.

WATSON BROTHERS,

MINEOWNERS, STOCK AND SHARE DEALERS, A[GENTS]

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

WHEAL GRENVILLE, AND SOUTH CONDURROW.—The lette[r] "C. W.," in last week's Journal, and the fact that two membe[rs] the committee of South Condurrow now hold 1100 shares in W[heal] Grenville, and are anxious to get upon and control the manage[ment] calls to our remembrance a project which the writer advocated [in] the *Mining Journal* of Aug. 14, 1875. The letter will be found [on] page 884 of the Journal of that year, and is headed "A. and [B.]" "A" referred to South Condurrow, "B" to Wheal Grenville, [and] was well known and discussed at the time, but through jealo[usy] and disinclination on the part of shareholders and officials the [plan] proposed was not carried out. Had it been so there can be no d[oubt] that at this moment "A and B" Consols would have been a[mong] the finest mines in Cornwall, instead of one of them having no[thing] "work upwards" for ore, and the other having to provide for [the] enormous expenditure that would never have been required. [Of] course, at that time neither company would acknowledge the ju[stice] of our remarks, and we got pretty well abused by both parties [for] making them; but let anyone read the letter now, as given below, [and] he will be able to judge how the present condition of both mines [has] justified them—the advantages that South Condurrow would [have] met with, and the outlay of many thousands of pounds, it w[ould] have saved Grenville. We only add that the letter was written [after] a thorough investigation into the working plans of both mines. [That] it did not suit the managers of either of them at that time to ack[now]ledge its truth. Copy of the letter referred to:—

"A" AND "B."

SIR,—There are two mines in Cornwall that I will call "A." [and] "B." They adjoin each other, and are on the same lode, which is [one] the richest and largest in the county. The cost of working these m[ines] is about 2500*l.* per month. "A" returns 40 tons of tin per m[onth] and makes a profit, but has power and means of returning [double] the quantity if the stuff could be got. "B" returns about 15 [tons] per month at a loss, but could raise more than double the quan[tity] if it had more power and means of returning it. "A" has the [deepest] 90 fms. deep, when it passes the boundary and enters into [the] "A," therefore, can go on making returns above the 90, and a [large] profit so long as the comparatively shallow ground lasts. [It] has spent a large sum of money in proving the same lode d[own] to the 160, where it is richest in the bottom. But to work it [at a] profit, and as the large extent of ground open fully justifies, [a] powerful machinery both for pumping and stamping (both of w[hich] "A" possesses) must be erected at a considerable expense to [the] shareholders.

Thus, as "A" and "B" now stand, they are of very little be[nefit] to the shareholders of either, but amalgamate them and "A" [and] "B" Consols would become the finest mining property in Corn[wall]. The costs of working them in this way would be something [like] 500*l.* per month less than at present, and the returns could pro[bably] be got up to 80 or 100 tons of tin per month; 80 tons a mont[h] 50*l.* per ton, would give about 2000*l.* per month profit; 100 tons [of] tin monthly might give over 30,000*l.* a year profit. "A" is in [the]

…so is "B," and if made into "A" and "B" Consols in 12,000 …the mines ought to be made to pay 20 per cent. per annum …on a market price of 10*l.* per share. At present neither of …is at half the price, and I give them the benefit of this hint. …objection to such a plan as I have hinted at ought to be made …the lords, for it might double their dues, and the benefit to the …holders in each concern would be great and mutual.

ARGUS.

…Aug. 14, 1875.

MORFA-DU.—It is gratifying to find that there is some probabi- …of this company being carried out, and the results we always …icipated—a rise in Parys shares—has taken place. It will be …that the agent values the reserves of copper ore in the latter …at 2000 tons. The halvans we referred to last week he esti- …at 150,000 tons, and when they were taken over by the pre- …company 200 tons per month were sold as high as 2*l.* per ton, …left a good profit. When the price dropped below 1*l.* the …were stopped. Many have asked why an appeal to the public …ally was not made for Morfa Du, but no such appeal was …when Parys was purchased; no prospectus of that company …ever issued, nor were the public invited to take shares. All of …large capital required was subscribed privately a few days, and …ght the much smaller sum required for Morfa-Du. Every …holder in Parys who comes forward and subscribers for Morfa-Du …get shares likely to go to a high premium, and will double the …of his Parys shares. Those who apply within the next few …will have the option of taking his proportion of the unissued …at par any time within twelve months. If those who have applied do not do so *now*, it will be their own fault if Parys is …d up.

…TURDAY, SEPT. 29.—Market firm for tin shares. Carn Brea, 22 to 24; Dol… 26 to 28; Tincroft, 9½ to 10½; Grenville, 1¾ to 2¼; Parys Mountain, 7s. …and in good demand; Van, 30 to 32½; West Tolgus, 75 to 77½; Great …20½ to 21½; Roman Gravels, 8¾ to 9¼; Rookhope Lead, ⅞ to 1.

…NDAY, OCT. 1.—Tin shares again in demand, and scarce. Parys Mountain, …hope, West Chiverton, and Great Laxey firm at quotations. Carn Brea, 22 …; Dolcoath, 26 to 28; Devon Consols, 3¼ to 3½; East Pool, 8 to 9; South …rrow, 7¼ to 7½; Tincroft, 9½ to 10½; Parys Mountain, ⅜ to ⅝; Rook… ⅞ to 1; West Chiverton, 13 to 15; Great Laxey, 20½ to 21½; North Laxey, …; Glenroy Lead, ⅞ to 1; Leadhills, 5 to 5½; Tankerville, 5¾ to 6¼.

…SDAY, OCT. 2.—The rise of 3*l.* in the tin standard has caused a good demand …stock at an advance, and shares in most cases difficult to obtain. The …ing are prices for the day:—Carn Brea, 27½ to 30; Devon Consols, 3¼ to …; Dolcoath, 30 to 32½; East Van, 4¼ to 4½; Glenroy Lead, 17s. 6d. to 20s.; …Laxey, 20½ to 21½; Leadhills, 5¼ to 5½; North Laxey, ⅝ to ¾; Parys …tain, 10s. to 12s. 6d., and firm; Penstruthal, 4s. to 6s.; Roman Gravels, 8¾ …; Rookhope Lead, 18s. to 20s.; South Condurrow, 7¼ to 7½; Tankerville, …; Tincroft, 11 to 13; Van, 30 to 32; Van Consols, ⅜ to ⅝; West Chiverton, … to 15½; West Tolgus, 74 to 76; Wheal Agar, 3½ to 4; Grenville, 1¾ to 2¼; …Crebor, 1½ to 2.

…NESDAY, OCT. 3.—Market for tin shares again active. Parys Mountain, …hope, and West Chiverton in demand. Roman Gravels and Leadhills weaker. …Brea, 27½ to 30; Dolcoath, 30 to 31½; East Pool, 8 to 9; Tincroft, 12 to 13; …Condurrow, 7½ to 8; East Van, 4¼ to 4½; Parys Mountain, 10s. to 12s. 6d.; …Chiverton, 13½ to 15½; Rookhope, 18s. to 20s.; Roman Gravels, 8½ to 9; …ville, 5½ to 6; Glenroy, ⅞ to 1; North Laxey, ⅝ to ¾; Leadhills, 5 to …; Ladywell, ⅞ to 1; Wheal Grenville, 2 to 2¼; West Tolgus, 74 to 76; Van, …32.

…RSDAY, OCT. 4.—Good demand for Dolcoath, Carn Brea, Tincroft, and West …erton at advanced prices. Parys Mountain, Rookhope, Great Laxey, and …Pool shares firm. Carn Brea, 29 to 31; Dolcoath, 31 to 33; Devon Great …ls, 3¼ to 3½; East Pool, 8½ to 9½; East Van, 4¼ to 4½; Glenroy, ⅞ to 1; …Laxey, 20½ to 21½; Ladywell, ⅞ to 1; Leadhills, 5 to 5¼; North Laxey, …; Parys Mountain, 10s. to 12s. 6d.; Prince of Wales, 4s. 6d. to 6s. 6d.; …Gravels, 8½ to 9; Rookhope, 18s. to 20s.; South Condurrow, 7½ to 8½; …ville, 5½ to 6; Tincroft, 12 to 14; Van, 30 to 32½; West Chiverton, 14 …; West Tolgus, 74 to 76; Wheal Agar, 3½ to 4; Wheal Crebor, 1½ to 2; …Grenville, 2 to 2¼; Richmond, 4¾ to 5¼; Eberhardt and Aurora, 5 to …; Flagstaff, 2¼ to 2½; Javali, 6s. to 8s.; New Quebrada, 2½ to 3.

…DAY, OCT. 5.—Market for tin shares steady, and prices rather in favour of …. Roman Gravels and Tankerville weaker. Dolcoath, 30 to 32; Tincroft, …; Carn Brea, 29 to 31; Roman Gravels, 8¼ to 8¾; Tankerville, 5 to 5½; …Tolgus, 74 to 76; Leadhills, 5 to 5¼; North Laxey, ⅝ to ¾; Great Laxey, … 21½; Rookhope Lead, 18s. to 20s; Van, 30 to 32; West Chiverton, 14 to …; Parys Mountain, 10s. to 12s. 6d.; Crebor, 1½ to 2; Glenroy, ⅞ to 1; Wheal …ville, 2¼ to 2½.

GAWTON COPPER MINE.

…a general meeting of shareholders, held at the offices of the …pany, Austinfriars, on Wednesday,

Mr. HUNTER in the chair,

…e accounts for the four months, charging coal to end of July, …ed a debit balance of 400*l.* 12s. 9d. There had been sold 421 …of copper ore, and about the same quantity of mundic.

…e circular convening the meeting and the minutes of the last …ing having been read and confirmed,

…e financial statement and a report from the agent was read.

…r. HUNTER said it would be seen from the accounts that the …had increased in the past four months by about 44 tons, as …pared with the previous four months, but he regretted to say …the amount realised had only been about the same, owing to …decline in the copper standard. This, however, they had no …trol over. He was, however, pleased to hear from Captain Rowe, …was present, that the mine was looking well, and had capital …pects, and with a fair, remunerative price for our produce, we …ll do well. It would be seen from the accounts there was a …t balance of 400*l.* 12s. 9d., and to provide for this the com…tee recommended a call of 2s. per share. It was then resolved …the accounts, with the agent's report, be received and passed; …a call of 2s. per share be made; that a vote of thanks be given …r. Bawden, the local purser, and Captain George Rowe, the …ager, for the interest they had displayed in the development of …mine; that the committee of management be re-elected; and …a vote of thanks to the Chairman close the meeting.

[For remainder of Meetings see to-day's Supplement.]

CAPITAL, AND ITS EMPLOYMENT.

…e impetus which has been given to mining enterprise by the …ance in the tin standard, as well as by the favourable nature of …reports of various lead companies, has had the effect of produc… …considerable activity in the mining market, and transactions …been much more numerous than for some time past. Should …tin standard be maintained—or better still, raised—Cornish …ng will receive an amount of business to which for some years …unhappily been a stranger, and higher prices must prevail. It must not be …sed that during this long period of depression the Cornish people have been …g—on the contrary, they have been employing every means to reduce ex…ture, and by judicious economy to endeavour to secure a profit out of the …divergence in prices which has occurred since Cornish mining was in its …erity. In illustration of this, we may state that in 1874 the standard was in …figures about 94, now after its rise it is but 71½. Amongst other improve… …we may cite the introduction of mechanical power in lieu of hand labour, …it may be noted that whilst a great success has attended the introduction of …Barrow borer at Dolcoath, a still greater one has been met with at Carn Brea …e use of the Beaumont drill, and it is certain that many leading mines will …ly adopt a similar course. Thus much for economy in working.

…we have already observed, the price of tin shares has considerably increased, …we may possibly be excused for enumerating a few of the changes. Carn …has advanced from 21 to 30, and no sellers; Cook's Kitchen, from 5s. to 25s.; …ath, from 23 to 30; East Pool, from 8 to 11; South Frances, from 12s. 6d. to …; Tincroft, from 9½ to 13; Wheal Uny, from 14s. to 25s.; Wheal Basset, … to 11; and West Basset, from 1d. to 12s. These are a few instances of what …rise has made in the course of a week, and it is obvious that another substan… …se will cause a corresponding advance in all Cornish shares.

…ning from the Duchy and its associations to lead mining, probably the most …event is the favourable nature of the first annual report of the Leadhills …pany. It may possibly be in the recollection of some of our readers that by …sonal inspection we made ourselves thoroughly acquainted with the immense …rty which this company possesses, and we have ever since advocated the …ase of the shares as a desirable investment. That these anticipations of ours …been verified a glance at the report will be sufficiently convincing, as a profit …[illegible]*l.* has been made during the past year, and dividends to the amount of …per cent. paid to the shareholders. This dividend, together with the handsome …nt of 1000*l.* placed to reserve fund, must be eminently gratifying to the share… …ers, who have at so early a stage acquired such a substantial return.

…have no hesitation in stating that this valuable property will, at the least, …ain its present remunerative rate, and appearances point to still larger divi… …s. Many improvements are in contemplation, and will doubtless be carried …. We allude firstly to the introduction of boring machinery, which alone will …a saving of 25 per cent. and do the work in a quarter the time; secondly, to …enlargement of the present and the laying-out of additional dressing-floors; …finally, the securing of a branch of the Caledonian Railway direct to the …s. These improvements all point to considerable savings and, of course, aug… …ed profits. We can only add that the present price of the shares is actually …par, and we are at a loss to account for such an anomaly; and we must …repeat that at anything like present prices capital would be judiciously em… …d in an investment in Leadhills.

…we have already exceeded the space which we could reasonably expect to have …ded to us. On a future occasion we desire to call attention to two progressive properties whose prospects are exceptionally promising—Rookhope and Pandora.

Old Broad-street, London, Oct. 5. ALFRED E. COOKE.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

LANDED PROPERTY INVESTMENT COMPANY (Limited).—Capital 1,000,000*l.*, in 25*l.* shares. This is, as its title indicates, a land investment company, the object being the acquisition of land for building purposes, &c. The subscribers are—W. C. Davis, 2, Suffolk Villas, Edmonton, 100; G. D. Mavet, 54, St. Mary's-terrace, W., 40; S. H. Jones, 27, Leadenhall-street; E. Woodington, 63, Queen Victoria-street, 5; T. Davy, 8, Ruskhill-road, Clapham, 2; W. T. Vivian, 29, New City Chambers, 1; R. S. Piggott, Albert Cottage, Peckham, 1.

DERBY LAND, BUILDING, AND INVESTMENT COMPANY (Limited).—Capital 50,000*l.*, in 20*l.* shares. The subscribers to the company are—George Dean, Parkfield House, Derby, 125; J. C. Checkley, Leicester, 125; George Wilson, Leicester, 150; G. R. Faire, Leicester, 125; W. Raven, Leicester, 125; S. Hall, Curzon-street, Derby, 125; E. Wood, Leicester, 62.

SMITH, STARLEY, AND COMPANY (Limited).—Capital 60,000*l.*, in 10*l.* shares. To acquire and carry on the Trafalgar Works, Bridge End, Leeds, and to continue the business of ironfounders, sewing machine manufacturers, &c. The subscribers are—Arthur Kelsey, Coventry, 1; Alfred Haynes, Westall Villa, Leamington, 10; George Ward, 11, Broadgate, Coventry, 1; Thomas Carpenter, Leamington, 10; Charles Smith, Leamington, 10; John Marshall Starley, 18, Upper Well street, Coventry; George Raynbird, Hockwood Park, Basingstoke, 10.

INVENTORS' AND GENERAL AGENCY (Limited).—Capital 10,000*l.*, in 5*l.* shares. To act as agents for the development of patents, &c. The subscribers are—W. White, 30, Thurlow-road, Hampstead, 40; F. Perigal, 1, Devonshire Villas, Kingston, 40; W. Loreby, Avenue House, Hammersmith, 40; J. A. Parker, Isleworth, 40; N. F. Dawe, Portman Chambers, Portman-square, 40; Thos. Hill, Merrylew, Glasgow, 40; W. Harvie, Glasgow, 20.

FENN AND COMPANY (Limited).—Capital 10,000*l.*, in 10*l.* shares. To carry on business as importers of, and dealers in, engineering and mechanical tools. The subscribers are—T. B. Ball, 1, Gresham Buildings, 200; J. Bartlett, Queen's-road, Peckham, 10; A. A. Timbrell, Leytonstone, 10; Arthur Bray, 3, Wansey-street, Walworth, 10; A. E. Ball, Stanhope Villa, Putney, 10; C. G. Musgrave, Paul's-road, Kennington, 10; J. O. C. Sargent, 14, Great St. Helen's, 100.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND is incorporated as an association "limited by guarantee," with permission from the Board of Trade to dispense with the word "limited" after its title.

GREAT GRIMSBY HIDE, SKIN, AND FAT MARKET COMPANY (Limited).—Capital 300*l.*, in 5*l.* shares.

PLAS-Y-NANT SLATE AND SLAB QUARRY COMPANY (Limited).—Capital 60,000*l.*, in 5*l.* shares. To acquire by purchase the right and interest of certain persons in a Tack Note and undertaking of lease for certain minerals under lands comprised in three farms known as Plas-y-Nant, Caeanguynion, and Tynyweirglodd, in the parish of Bettws, Carnarvon, and to mine for copper, lead, tin, sulphur, &c. The subscribers are—George Firth, Bradford, stuff merchant, 40; D. Cayley, Brompton, near York, land agent, 40; Whitehall Dodd, Llanerch Park, near St. Asaph, 40; Wm. Margerison, Ilkley, near Leeds, solicitor, 20; H. Dixon, Bradford, gentleman, 20; R. Ingleby, Pateley Bridge, spinner, 20; James Morley, 15, New Cannon-street, Manchester, commission agent, 20; D. Nichols, Leeds, builder, 20; W. H. Vickers, Stanningley, near Leeds, 20; W. W. Adsworth, Bradford, wool stapler, 20. The directors are—Messrs. W. Dod, Digby Cayley, J. W. Margerison, J. Morley, R. Ingleby, D. Nichols, and W. H. Vickers. The qualification for any future director will be the holding of 20 shares.

LAND MORTGAGE OF ENGLAND ASSOCIATION (Limited).—Capital 100,000*l.*, in 20*l.* shares. To advance money on freehold and leasehold properties. The subscribers are—F. L. Malgarine, 7, Whitehall-place, 500; L. Routh, 9, Great Charles-street, Notting Hill, 5; W. P. Gaskell, Fulmer, near Slough, 5; E. E. Cronk, 23, Cockspur-street, 5; W. J. Worthington, 9, Buckingham-street, Adelphi, 5; W. A. Earnshaw, Wathhall, Wath-upon-Dean, Yorkshire, 5; Sir T. C. Knowles, Mayfield, Ryde; E. Smith, Manor Park, Lee, 5.

UNITED FIRE RE-INSURANCE COMPANY (Limited).—Capital 50,000*l.*, in 10*l.* shares. To carry on the business of fire re-insurance, and to undertake every description of contract of re-insurance against losses by fire. The subscribers are—T. Brooke, Armitage Bridge, near Huddersfield; J. W. Brooke, Fieldhall, Mirfield; E. Armitage, Huddersfield; Robert Whitworth, 20, Cross-street, Manchester; James Barlow, Albert Mills, Bolton; John Aitken, Sandfield, Bacup; T. Bright, 32, Spring Gardens, W.

NORTHERN COUNTIES BREWERY COMPANY (Limited).—Capital 30,000*l.*, in 10*l.* shares. To carry on business as brewers, &c. The subscribers (who take one share each) are—Johnson George, Bensham, Durham; J. S. Smirk, Newcastle-upon-Tyne; J. Almery, Newcastle; J. Blake, Newcastle; T. Ferguson, Gateshead; G. Brown, Newcastle; W. Charlton, Newcastle.

COLORADO UNITED SILVER MINING COMPANY.

THE TERRIBLE MINE.

Last Monday we had the pleasure of inspecting all the levels of this mine, commencing with and below the fourth or tunnel level. Since their consolidation these properties—the Terrible, Silver Ore, Brown, and other lodes, including the Union tunnel—are owned by the Colorado United Silver Mining Company, of which the Hons. W. A. Hamill and J. B. Chaffee represent two-thirds, and the late Terrible Lode Mining Company the remainder. These properties are now in successful operation under the superintendency of the Hon. W. A. Hamill and G. M. Henty, the latter of whom, in company with Mr. Slockett, one of the foremen of the mine, led us through the levels named above to all the present workings of the mine, courteously giving us such information as was required beyond what we could actually see and hear ourselves.

The Terrible tunnel is near 350 ft. in length, and is laid with T-rail, double track, the entire distance. Near its junction with the lode it diverges, one branch continuing right ahead through the lode is used at its termination for a store-house for powder, &c., and the other curving to the right leads to the engine-room, and the main shaft. The engine is 25 horse power, and the room is large and firm. The engine-shaft is 300 ft. deep at the present time, and inclines at an angle of 18° from the perpendicular; it is now in process of sinking, and will be continued about 40 ft. further. This will allow 80 ft. of ground between the seventh and eighth levels, and a sump 20 ft. deep in the bottom of the shaft for the collection of water, which is pumped out by a Knowles' Special, which at this time is not required to be used more than 4 hours out of the 24. Thus far the dimensions of the shaft are 12 ft. by 14 ft., but it is probable that it will be considerably reduced in size from its present point to its completion.

Four levels are now being actively worked—the fourth, fifth, sixth, and seventh, and when the shaft is sunk 20 ft. deeper the eighth level will be developed. The winzes are generally about 120 ft. apart, and the levels about 60 ft., but the distance between the seventh and eighth levels will be 80 ft.; this, because the Union tunnel—which is now completed to a point 480 ft. from its mouth, and 140 ft. from the Terrible lode—will cut this lode on a horizontal plane 20 ft. below the seventh level, though 530 ft. west of the Terrible engine shaft, and directly under the Silver Ore shaft, thus constituting a main level, to which all subsequent levels on this lode will be made to conform. Commencing at and west of the engine-shaft, a distance of about 400 ft, and between the fifth levels and the surface, the ground has been principally stoped out. This furnished, in past years, continuous employment for scores of miners, and formed an important item in the annual bullion product of Colorado.

The drifts are all run by contract of a uniform size of 7 ft. high and 5 ft. wide, and nearly the whole of them are fitted with T-rail, and the air is good throughout the mine. The drift west from the shaft on the fourth level is 550 feet in length, and here four men are employed, two of whom are stoping ahead of this level about 200 ft. west of the engine-shaft. On the fifth level we found several men at work constructing a winze through ground which has already been stoped out. This is a continuation of the Silver Ore shaft, so that it is now down to the sixth level. This point is 530 ft. west of the Terrible shaft. This level has been opened out 650 ft. west from the engine-shaft. The sixth level has been run 550 ft. in the same direction, and here three or four miners are stoping out ground which carries several small veins of ore, containing zinc, galena, and iron, with some pyrites in considerable quantities, with some pyrites of copper; 390 ft. from the shaft a winze is being sunk, which at the time we saw it was 19 ft. deep. Two shifts of men are sinking this winze on a vein of ore about 6 in. in thickness, which turns out about 2 tons of ore per fathom. Near the east end of this level, a short distance from the shaft, several men are stoping on three or four streaks of good concentrating mineral. In the breast of the drift is some promising mineral, and work will shortly be commenced here to continue it further.

In the east drift on the seventh level—which is now opened a distance of 50 ft. from the shaft—several small streaks of mineral are in sight, and a contract has been let for drifting it 100 ft. further. The first stope commencing at and west of the shaft, is worked by John Taylor and Co., under contract, and employs six men. A vein of 3 or 4 in. is in sight here; west of this on the next stope J. Viol and Co. have a contract on a similar body of ore about 6 in. in thickness, which turns out about 2 tons of ore per fathom, and employ eight men. Between this point and the west end of this level—which is nearly 300 ft. from the engine-shaft—is a vein of ore not less than 12 or 14 in. in thickness showing in the head of the drift. There is no stoping done below the sixth level, with the exception of the contracts named above. In the breast of the west drift on the seventh level three shifts of men are at work on several veins of ore, consisting in a great measure of zinc-blende, galena, &c., with spots and patches of brittle silver disseminated through the ore veins, and even through the quartz. This ore is improving with drifting, and Mr. Henty informs us that the brittle silver is principally found in combination with the light-coloured zinc.

The Terrible Mine, in connection with the Silver Ore and Brown Mines, furnishes employment for about 150 men at the present time. A large frame building, 25 ft. by 35 ft., has recently been erected on the Terrible dump for the convenience of the miners, to be used as a changing and heating house, which we doubt not will be extensively patronised by the men during the winter season.

— *Colorado Miner*, Sept. 8.

Colonel Fair's Sulphurets Dryer is nearly finished and will be ready for use in a short time. It consists of a cast-iron cylinder 30 ft. in length, and having an inside diameter of 2 ft. This cylinder or shell is composed of ten sections, cast with flanges, in order that they may be bolted together, as are the sections of a pump column. Through the whole length of the shell runs a shaft, on which is the thread of a screw, which thread moves the sulphurets slowly through the cylinder. The shell, or cylinder, is to be set in a proper furnace, in which such a degree of heat will be maintained as will dry the sulphurets without evaporating the quicksilver they may contain, or volatilising the silver. The shaft running through the shell is a strong wrought iron pipe 10 in. in diameter, and upon this is fastened the screw, which is cast in segments and riveted to the shaft. The thread is 3 in. in depth, making the whole diameter of the shaft and screw 16 in. The fire-grate of the furnace will be at the end of the cylinder at which the sulphurets are discharged, and the chimney at the end where they will be fed in; therefore, they will be heated up by degrees, and will pass through the greatest heat just before being discharged. The screw will be operated by means of a small steam-engine. The excavation for the foundation of the furnace is completed, and the masons are ready to begin their part of the work. The greater part of the apparatus is completed and already on the ground. In case this shall be found to do good work, a similar machine will probably be put up at the Omega mill, for use in drying slimes.—*Gold Hill News.*

Capt. Plummer, Superintendent of the English Company's mine at Mineral Hill, arrived in Eureka on Tuesday evening's train, and will prolong his visit for a number of days. During his stay he will visit the Ruby Hill mines and other points of interest in the district. The captain is a most intelligent gentleman, and has had a very large experience in mines and mining. The London company are very fortunate in securing his services, and his administration of affairs at Mineral Hill will redound both to his and their credit.

RICHMOND.—Operations at the Richmond reduction works are being carried on at a lively rate. The two furnaces are steady at work reducing ore, and the quantity of bullion turned out exceeds the anticipations of the managers. The refinery will start up to-day, and shipments of lead and silver follow shortly. Three ore trains of ten cars each, an aggregate of 180 tons, arrive from the mine daily, and the quantity will be increased as it is needed. There is a report that two more furnaces will be started up in a few days, one on Jackson ore, and the other on the rock from the company's mine. Considerable outside custom ore is being smelted. The Bald Eagle sends in a daily shipment of 10 tons, and other lots from Prospect Mountain and vicinity are being received. The southern portion of Eureka is fast regaining its former busy aspect, and business men and property owners in that locality are much encouraged at the outlook.—*Eureka Sentinel*, Sept. 14.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for July is 15. They have consumed 1418 tons of coal, and lifted 10,000,000 tons of water 10 fms. high. The average duty of the whole is, therefore, 49,000,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Mellanear—76 in.	Millions 62·0
Mellanear—Gundry's 80 in.	58·4
West Wheal Frances—58 in.	55 9
West Wheal Seton—Harvey's 85 in.	58·5
West Wheal Seton—Rule's 70 in.	62·7

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Sept. 24	—Frongoch	50	£11 12 6	Weston, Son, and Co.
	— ditto	50	11 10 0	Panther Lead Company.
	—Goginan	40	15 17 6	Weston, Son, and Co.
26	—Powell Consolidated	20	11 11 0	Walker, Parker, and Co.
27	—Climera	50	12 7 0	Nevill, Druce, and Co.
	— ditto	55	12 1 0	ditto
	— ditto	55	11 18 6	Walker, Parker, and Co.
	— ditto	22	11 18 6	ditto
	— ditto	38	12 2 6	ditto
	— ditto	7	1 17 6	ditto
29	—Grogwinion	100	12 3 6	George Burr.
Oct. 2	—Great Laxey	100	20 0 0	Weston, Son, and Co.
4	—West Tankerville	35	12 5 0	Runcorn Smelting Co.
5	—Rookhope	50	11 12 6	J. Walton and Co.

COPPER ORES.

Sampled Sept. 19, and sold at Tabb's Hotel, Redruth, Oct. 4.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Tolgus	74	£3 6 0	East Pool	49	£3 0 0
ditto	64	7 17 6	ditto	24	1 9 0
ditto	60	7 9 6	Wheal Basset	32	5 8 6
ditto	57	4 10 0	ditto	28	5 14 6
ditto	53	7 17 0	Gt. Crinnis & Carlyon.	52	5 13 6
ditto	32	6 4 6	Carn Brea	33	1 6 6
Mellanear	76	3 2 0	ditto	18	2 15 6
ditto	70	3 15 0	Wheal Eliza	50	4 14 6
ditto	66	3 1 0	West Poldice	27	3 2 6
ditto	52	3 1 0	Penstruthal	20	5 16 6
ditto	39	3 12 0	West Godolphin	18	7 7 6
South Crofty	53	1 17 0	Wheal Unity Wood	11	3 12 6
ditto	48	2 6 6	Wheal Grenville	9	4 15 0
ditto	34	1 19 6	West Wheal Eliza	7	7 5 6
West Seton	51	3 11 6	East Basset	6	1 7 6
ditto	41	2 13 6	Poldice	3	2 10 0
ditto	32	3 1 6	New Hendra	3	3 18 6

TOTAL PRODUCE.

West Tolgus	340	£2068 9 0	West Poldice	27	£ 84 7 6
Mellanear	303	998 8 0	Penstruthal	20	116 10 0
South Crofty	135	276 16 0	West Godolphin	18	132 15 0
West Seton	124	390 8 0	Wh. Unity Wood	11	39 17 6
East Pool	73	181 16 0	Wheal Grenville	9	42 15 0
Wheal Basset	60	333 18 0	West Wheal Eliza.	7	50 18 6
Great Crinnis, &c.	52	295 2 0	East Basset	6	8 5 0
Carn Brea	51	93 13 6	Poldice	3	7 10 0
Wheal Eliza	50	236 5 0	New Hendra	3	11 15 6

Average standard .... £ 86 5 0 | Average produce 6

Average price per ton £4 3 0

Quantity of ore .... 1292 | Quantity of fine copper 103 tons 9 cwts.

Amount of money £5369 9 6

LAST SALE.—Average standard .... £ 88 0 0 | Average produce 6¾

Standard of corresponding sale last month, £ 86 18 0—Produce, 7⅞

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	159	£ 988 15 0
Grenfell and Sons	341	1247 13 0
Nevill, Druce, and Co.	266	1011 18 0
Williams, Foster, and Co.	235	1334 12 0
Mason and Elkington	156	509 15 6
Charles J. Lambert	135	276 16 0
Total	1292	£5369 9 6

NO SALE on Thursday next, October 11.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week—Mines and parcels.—Devon Great Consols 877—South Caradon 470—Marke Valley 360—Wheal Crebor 285—Glasgow Caradon 235—Gawton 190—Hingston Down 156—Phœnix 120—West Maria and Fortescue 116—Bedford United 78—Prince of Wales 28—Wheal Edward 9. Total, 2924 tons.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Oct. 4: The new shaft is now down 12 fms. 2 ft. below the deep adit level. I have been dialling the north lode this week, and am now making a plan and section of it.

BODIDRIS.—H. Hotchkiss, Oct. 3: Everything is going on regularly. In the 60 end east good progress is being made in a very promising lode. The cross-cut south at this level progresses rather slow, but the ground is very congenial for the production of lead ore; when the lode is met with, which, according to present indications, cannot be far ahead of present forebreast. Other points are much the same as for some time past, calling for no special remark. Will send full report next week.

CAMBRIAN MINES.—Esgair-ffraith: T. Glanville, Oct. 4: In the eastern shaft, I am pleased to say, the copper part of the lode is 3 ft. wide the whole length of the shaft, and will produce 5 tons of very rich ore per fathom. By Saturday next the shaft will have been sunk to the required depth for driving levels east and west on the lode.

Esgair-hir.—T. Glanville: The lode west of new shaft is worth 20*l.* per fathom for lead ore.

CLEMENTINA.—John Roberts, William Bennetts, Oct. 3: The engine-shaft is down 1 ft. 6 in. below the 34, making sufficient room for the time being for a fork, and we have commenced driving south this afternoon, and shall set the end in a day or two. The lode is fully 3 ft. wide, containing spots of lead, 2 ft. of which is a beautiful lead-producing character, and must soon become productive of lead, especially as we have only 3½ fms. to drive to intersect the east and north lode, which we expect to do in a month. We have from 7 to 8 tons of lead ready for sampling, and we have a large pile of stuff more to pick over.

COMBMARTIN.—John Comer, Oct. 4: There is no change of any importance to report on this week. Saturday being our pay and setting day we will send a full report.

COURT GRANGE.—James G. Green, Oct. 3: Setting Report: Engine-Shaft: There being insufficient water for the pumping-wheel the water in the shaft is gradually rising; we are in consequence prevented from completing the skipway, otherwise we should have all in working order in the course of a fortnight. The stope in the 30 maintains its productiveness; the ground is hard; set at 80s. per fathom. The 16 west is full of stuff, and suspended for the present. The 16 east is set to two men, at 80s. per fathom, the lode improving in character. Stoping has been done in advance of this end at the 30; I, therefore, hope to cut something good shortly. The adit east is out of the lode; it is set to four men, to cut in the south side, at 60s. per fathom; when the lode is cut through driving east will be commenced in search of the bunch of lead in the end of the 16. To sink a winze below the shallow adit, to four men, at 160s. per fathom; this will afford passage for orestuff in the back of the shallow adit; there are only 2 fms. to sink to hole into the back of stope above the deep adit. We have six men in shaft, four men clearing shallow adit, and four men making trial stopes in the old mine. We are making arrangements to sink the old Broginin shaft to the level of the 16, and then to drive west to meet the same, but all work in this part of the mine had to be stopped to-day, owing to the shortness of supply of surface water; for the same reason we are unable to make much progress with our buildings, as we cannot wind the stones from the quarry. I am glad to say that the big job of making culvert and excavations for the crushing-wheel is completed. Excellent progress is being made at the new reservoir.

DE BROKE.—J. Philips, Oct. 3: The lode in the 45, west of Wilson's shaft, is more than 6 ft. wide, a part of which carries a mixture of quartz, lead, and copper ore, saving work for dressing. The 45 east is producing at times good stones of lead and copper ores. The rise in the back of the 35 is holed to the winze, and some of the men placed to stope a piece of lead ore ground near the rise; particulars on this point will follow in next report. The stope at the 28 is worth about 15*l.* per fathom. The two stopes at the 35 are yielding from 20 to 25 cwts. of lead ore per fathom. We sold 20 tons of lead ore on Friday last, but the supply of water has so much fallen off that we cannot crush nor draw with any speed, the like of drawing gear requiring alteration. I am having it shifted and re-set, from the drawing-machine to and including the shaft-tackle; this work, which has become necessary for drawing at increased depth, will occupy nearly a week. The underground bargains will be continued regularly.

DENBIGHSHIRE CONSOLIDATED.—John Pryor, Oct. 4: The 112 east is in precisely the same shaley formation that it has been in for some time, and I do not expect any improvement now until the Coed-y-Fedw lode is reached. In the north cross-cut I am pleased to say that we have intersected one of the most promising lodes that I have ever seen. We have had no time yet to make a trial upon it, but I have every reason to think it will turn out very valuable. The only other change worthy of note is at Parry's sump, which improves for lead, and is now close upon the depth at which we shall drive out to reach the run of ore proved here some long time since.

DERESBY MOUNTAIN.—J. Roberts, W. Bennetts, Oct. 3: No. 3 Adit: We have set this to four men, at 15*l.* per fathom. There is no change in the lode since our last report. From the bottom of the end to about half-way up to the roof it is worth about 7 cwts. of lead per fathom, and about the same quantity of blende. We hope to make better progress than we have done, as we have a more steady pare of men in it.—No. 4 Adit: We have completed the tramway here, and shall clear out the leadstuff directly, when we shall resume driving the end. The excavation for the wheel pit will be completed to-morrow, and we propose inviting tenders direcly for the mason work.

DERWENT.—J. Morpeth, Oct. 2: I beg to hand you a few lines as a weekly report.—Jeffries's Shaft—Middle Vein: The 95 east is without change; in this level a few fathoms back from the end, where we are taking down the sides, the lode is gradually lessening in width. No. 1 stope, in the back, is 10 ft. wide, and worth 30 cwts. of ore per cubic fathom, or 2½ tons for full width. No. 2 stope is also 10 ft. wide, and worth 2 tons per cubic fathom, or 3 tons 6 cwts. for whole width. No. 3 stope is 7 ft. wide, and improved to 24 cwts. of ore per cubic fathom. No. 4 stope is 4 ft. wide, and yields 14 cwts. of ore per fathom. No. 5 stope, started this week, is 3 ft. wide, and worth 10 cwts. of ore per fathom. In the cross cut at the 95 there is no change. The 93 west is as last reported. The respective value of the workings over this level is 14, 10, 14, and 20 cwts. of ore per fathom; the average width of vein 7 ft.—Sun Vein: This vein in the level west of sump is 2½ ft. wide, and produces 4 cwts. of ore per fathom; east from sump the vein is 3 ft. wide, and worth 2 tons of ore per fathom.—North Vein: The 80, east of Reed's, continues as last reported.—Taylor's Shaft—Middle Vein: The cross-cut at the 40 has not made any discovery as yet worth naming.—Westgarth's Shaft—Middle Vein: The 93 east is as last reported. The 74 west is 2 ft. wide, and produces 16 cwts. of ore per fathom. The various branches at surface are progressing satisfactorily.

DEVON GREAT CONSOLS.—There is nothing new in the report from the mines this week. The sampling of ores for sale on the 18th inst. is computed at 877 tons.

EAST VAN.—W. Williams, Oct. 4: The 23 west looks a little more promising than it has for some time. In the stope there is no change to report. We shall effect a communication early next week between the 40, east of Tempest shaft, and the same level driven west from the winze sunk below A cross-cut; this done we shal. resume the sinking of the shaft for the 55.

EAST WHEAL LOVELL.—R. Quentrall, Oct. 3: Fatwork: In the winze below the 100 west the lode continues to be worth 20*l.* per fathom. There is no alteration in the 100 west or 80 east since my last report. The north lode in the shaft below the 17 maintains its size and favourable character, and we are making fair progress in sinking.—Tregonebris: In the adit end driving west the ground is more favourable, and the lode contains a little more tin.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Oct. 1: Elliott's shaft is nearly down the required depth for the 90; we expect to commence driving and cutting plat after next week, in the meantime we shall be getting down the skip-road for drawing from this deeper level. The winze in the bottom of the 78, east of shaft, is worth 12*l.* per fathom; ground favourable, and is being pushed on as fast as possible. The 78 east is holed to the winze from the midway; we are now cutting down the bottom of it; when this is done we shall open fully into the lode, and give its value. The level west, on south branch, is worth 6*l.* per fathom. In the cross cut south the ground is changed, some killas, and letting out water; we hope to find more lode here soon. No change in the ends on the caunter lode. The stopes and pitches throughout the mine continue about the same value as last reported. The quantity of ore for our next sale is computed 235 tons, which will be sold for the 18th inst.

GLASLLYN.—John Davies, Oct. 3: In company with Capt. Jenkins, of Cafartha, I went to see the new lode yesterday. It is to be seen in the brook east of the Moel; it is a strong lode, but as yet we have only found it in this place, therefore I cannot say how it is running. I was informed that it is also to be seen in the west side of the mountain, and intend to search for it there. I have been in all the levels of the copper mine; there is very good copper there. I cut some very good pieces east of the winze. I have no doubt this will turn to lead in depth, as it is a strong lode, very like that now looking so well at the adjoining mine.

GORSEDD AND MERLLYN CONSOLS.—W. Edwards, Oct. 4: I think I may say that the mine is looking better than it has done. In the bottom levels east and west the ground, although hard, is showing splendid lead ore. We have now got a rise through to the upper level east, and the men have resumed the driving of the intermediate level in this direction. There is a splendid course of ore here, and the ventilation is perfect. All other points as usual. In the north cross to cut the lode west the ground keeps favourable, and more lead is coming in the clay. I fully expect to cut the vein during the next week. We are getting on fast with another 50 tons for Thursday's sale.

GREAT DYLIFFE.—Evan Evans, Oct. 3: Dyliffe Lode: At the 132, east of Dyliffe lode, we are now stripping the lode. The lode is strong here, and what we have stripped of it is worth about 18*l.* per fathom; at this place we shall commence a new stope next week by six men. The 132 west is not yet in the ore that we expect to meet. The stopes over the 132 east and west are worth about 14*l.* per fathom; the one over the west is nearly through to the level above. At the 95 east we opened and timbered this level to the end, and are now driving it forward to meet a run of ore that a stope is coming upon from the 105, and yesterday we had a nice string of ore in this forebreast. In the cross-cut, at the 80, we have seen the lode, but are not yet through it. We shall value it next week. In the drivings, in bottom of winze, under the 40 fm. level, the lode is still looking good, but, as we are not stripping it through, we cannot value it at present. From the drivings on the new lode we had very nice stones of ore yesterday, the forebreast at present looking very well.—Llechweddu Lode: The stopes over the 105 are worth about 12*l.* per fathom. We have three stpoes over the 95 fm. level, worth about 14*l.* per fathom each. The cross cut from the Llechweddu has intercepted the Egairgaled lode, but unfortunately the soft, shally, and unproductive ground met with in the upper levels near to the junction of the two lodes named kicks further to the east than we could have expected. The rich portion of the lode is at the east of our driving, according to the evidence of the upper levels. The cross-cut gives the shortest practical communication to us between the two lodes; it is more satisfactory to drive on a lode than to drive a cross-cut out of the lode. We cannot, however, do justice to the great Esgairgaled lode at this depth unless we proceed, as we propose to do, to drive east upon it. We will give particulars next week. We have sampled 60 tons of ore to day for sale on the 10th instant.

GREAT RETALLACK.—John Harris, Sept. 29: The lode in the 53 east is worth fully 2 tons of blende per fathom. The same level, west of shaft, is worth about 1 ton per fathom, and the lode in the 53 driving west, east of the whim-shaft, is worth 2 tons per fathom: this is for 6 ft. of the lode in length and depth, the lode having a very flat underlie. The pitch below the 45 east is worth 2 tons of blende per fathom, and the pitch below the 45, west of whim-shaft, is worth 1 ton per fm.

GREAT RETALLACK.—John Harris, Oct. 3: The two ends east of whim-shaft at the 53 are communicated, and I have set the men (eight) to stope the back of the level at 40s. per fathom, and 15s. and 10s. 6d. per ton for Nos. 1 and 2 blende, the men to pay all cost of dressing, &c., as usual; the part of the lode carried is about 2½ ft. wide, and is worth about 3 tons of blende per fathom. All other parts of the mine much the same as when last reported.

HINGSTON DOWN CONSOLS.—Thomas Richards, Oct. 4: Bailey's Shaft: In the 172 east and west the part of the lode carried (5 ft. wide) contains quartz, capel, mundic, peach, and good stones of ore, and is very promising. In the 160, west of Nicholls' winze the lode is worth 4 tons of ore, or 10*l.* per fathom. In the stope in the back of the 160, east of Nicholls' winze, the lode is worth 6 tons, or 18*l.* per fathom. The stopes in the back of the 150, and the back of the 140, east and west of Chynoweth's rise, are let on tribute. The sampling on Friday last was 156 tons.

HOLMBUSH.—H. Bennett, Oct. 4: I am very much pleased with the appearance of the 60 end, west of the engine-shaft. The lode is about 18 in. wide, containing good stones of arsenical mundic and copper ore, and I have not the least doubt but what the lode will improve as we drive west, and away from the disordered ground. We are laying down a tram-road in this level to the present end, and one also in the 60 fm. level on the lead lode. We shall thereby effect a considerable saving in the price paid for removing the stuff. We have commenced to drive west from the lobby on Dowling's lode, which is at present 2 ft. wide, composed of gossan, with spots of sulphur-mundic and copper ore. There is no alteration in any other part of the mine that requires notice. The machinery is in good working order.

KINGSTON CONSOLS.—W. Hancock, J. Chynoweth, Oct. 4: The lode in the 30, west of engine-shaft, is producing 15 cwts. of blende and 4 cwts. of lead per fathom—a very kindly lode. In the level from No. 4 winze, driving towards it, the lode is worth about 1 ton of blende and 5 cwts. of lead per fathom. The stope east of No. 4 winze is worth for lead and blende 25*l.* per fathom. Other places are much the same as last reported on. We sampled to day (computed) 75 tons of blende and 13 tons of lead—No. 1 blende, 30 tons; No. 2 blende, 30 tons; No. 3 blende, 15 tons. No. 1 lead, 8 tons; No. 2 lead, 5 ton; to be sold Oct. 11.

KIT HILL TUNNEL.—H. Bennett, Oct. 4: We are pushing on the south end of the tunnel with all possible speed. The ground being favourable, satisfactory progress is being made.

LADYWELL.—A. Waters, Oct. 4: No material change to notice here since last report. The new shaft is cased and divided, and machine kibble sent to bottom to-day. Hope to hole the winze from adit to the 16 fm. level this week, when the adit end will be well ventilated.

LLAN GAN (Lead).—Capt. Wasley, Oct. 3: Engine-Shaft: In the south cross-cut we have cut a strong lode, it is a very regular one underlying north, with a good footwall, and contains good work for lead; the further we get away from the cross-course the better the lode will be; the men daily expect to intersect the lode in the north cross-cut.—Old Engine-Shaft: The lode in the footway shaft has a most satisfactory appearance, and promises to be a good one. The stopes in the back of the level west of shaft continue to turn out a quantity of ore; next week we shall be able to turn out double the quantity of work.—Wright's Shaft: The lode in the stopes east of shaft never looked better, and we are sending large quantities of work to the dressing-floors of better quality than heretofore.—Quarry Lode: The men are at work here on tribute. We are pushing on the lead dressing.

LOVELL.—J. Prisk, Oct. 4: The lode in the Howman shaft, sinking below the 26, is improved, and will now produce over 3 tons of tin per fathom for length of shaft, and getting richer as depth is attained. The lode in the 25 end west is 7 ft. wide, and worth 12*l.* per fathom. The lode in the stope in the bottom of the 30 is 15 ft. wide, worth 20*l.* per fathom. The lode in No. 1 stope, in the back of the 30, is worth 10*l.* per fathom. The lode in No. 2 stope, in the bottom of the 35, is worth 10*l.* per fathom. In the eastern sett the water in the new shaft is falling off daily, and we shall commence to make a further trial to the lode in a day or two.

MEDLYN MOOR.—J. Prisk, C. Rowe, Oct. 4: The ground in the engine-shaft, sinking below the 27, is much easier for sinking, and we think the lode will be met with shortly, which we expect will greatly assist our returns. The lode in the 27 west is worth 6*l.* per fathom. The lode in the 27 east, on No. 2 north lode, is worth 7*l.* per fathom. The tributers are all working, and breaking good quality tinstone.

MELLANEAR.—J. Gilbert, Oct. 3: The lode in the 50, west of the skip-shaft, is 4 ft. wide, and worth 3¼ tons of copper ore per fathom. The stope in the back of the 67, west of the shaft, and west of No. 1 rise, is still worth 4½ tons of ore per fathom. The lode in the 60, driving west from the top of No. 3 rise, is 2½ ft. wide, and worth 1½ ton of ore per fathom. The lode in the stope in the bottom of the 67, west of the cross course, is 6 ft. wide, and worth 7 tons of ore per fathom. The lode in the winze in the bottom of the 80, west of the skip-shaft, is 4 feet wide, and worth 3 tons of ore per fathom; this winze will be holed to the 90 some time this week. The lode in the 90, west of shaft, is worth 3½ tons of ore per fathom, with more lode standing in the south side.—Gundry's Shaft: The 90 cross-cut has been driven south of shaft 5½ fathoms, and we calculate there are 4 fathoms more to drive to intersect the lode in this level; there will then be about 20 fathoms to drive east on the course of the lode to meet with the 90 fm. level, west of the skip-shaft. The lode in the 80, west of the shaft, is again more hard and spare for driving, and is producing about 1 ton of ore per fathom. The lode in the stope in the back of this level, east of shaft, is worth 6 tons of ore per fathom. The lode in the 70, west of shaft, is 4 ft. wide, and worth 3 tons of ore per fathom. The lode in the rise in the back of this level is without change, and still worth 3 tons of ore per fathom. The lode in the winze in the bottom of this level is worth 2 tons of ore per fathom. The lode in the 60, east of shaft, is 3 ft. wide, and is producing a large quantity of mundic and about 2 tons of ore per fathom. The winze in the bottom of this level is worth 3 tons of ore per fm. There is about 6 ft. more to sink to communicate with the rise in the back of the 70. The lode in the rise in the back of this level is 4 ft. wide, and worth 4 tons of ore per fathom; this rise is now up 7 fathoms, and the lode for this distance will average fully 3½ tons of ore per fathom. Our machinery and pitwork are in good working order, and we are getting on very well with all surface erections.

MONYDD GORDDU.—James G. Green, Oct. 3: Fair progress continues to be made in the engine-shaft, and all well. I hope the men will have completed their bargain to fix cistern, cut lode, &c., by time specified at the commencement —Nov. 13. After this is done better progress may be expected. The 12 cross-cut to north lode is in 6½ fms., bargain not completed. Since dialling the mine I think there is about 5½ fms. further to drive. To stope in back of the 12, west of cross-cut, to six men, at 65s. per fathom, including building a wall and fixing stull over level; the lode in the western end is crossed by a slide, and is 20 ft. wide, worth on an average 8*l.* per cubic fathom, with signs of improvement as we go up. To stope the back of the 12 east, on junction of lodes, to four men, at 80s. per fathom; the lode is 6 ft. wide, worth 20*l.* per fathom. To stope the back of adit, on south lode, east of shaft, to two men, at 75s. per fathom; the lode is 18 in. wide, worth 9*l.* per fathom. On the whole, the mine is looking better than I have seen it, and should we intersect the north lode rich we should be in an excellent position for returning regular samplings of ore. At surface we have got the incline in good order, and the ore-pass enlarged. The bonnet for wheel and repairs to the drawing-machine house, to enable us to draw by night, are now having attention. Our supply of water for drawing and dressing is short, and both these departments are in consequence at a standstill. Our parcel of ore realised 142*l.*, and has been delivered to the railway. Should we have rain we will push on for another sampling with all speed.

NEW BRONFLOYD.—T. Kemp, Oct. 4: Setting Report: No. 3 Shaft—North Lode: The 121 end level has been extended west in the past month 2 fms. 0 ft. 7 in.; total distance from shaft 6 fms. There is no change to report in the character of the lode carried by this drivage, which is producing lead ore, but not enough to value; this bargain is re let to six men, at 200s per fathom. Owing to the dry weather our surface water is very limited, consequently we have great difficulty in keeping the bottom of the mine in fork. We shall proceed to sink a winze in the bottom of the 110 on Monday next, the object of which is to ventilate the 121, and also to open the ground out for stoping. Twelve men to stope over the 110, east of winze, at 75s. per cubic fathom; lode worth 20 cwts. of ore per cubic fathom. The men in the stope to the west of ditto, and towards the winze, are employed in filling up the workings, when done will resume stoping on a lode worth fully 20 cwts. of ore per cubic fathom. Six men to stope the lode to the west of winze, at 75s. per fathom; lode worth from 12 to 15 cwts. of ore per fathom. Four men to drive Curtis's cross-cut south, in the 73 east, at 120s. per fathom, which includes the removal of stuff; ground continues favourable for opening, being composed of killas and spar, at times showing strong spots of ore; from these indications I should say we are getting near the lode.—No. 2 Shaft.—Middle Lode: Two men to drive the 52 end, west of Lloyd's cross-cut, at 8s. 10d. per fathom, which includes the removal of stuff; the part of the lode carried by the drive is principally composed of strong killas, carrying small strings of ore. Owing to the accumulated stuff we are obliged for the present to suspend the 52 end east of shaft until we get a better supply of water for hauling purposes. Four men to stope over the 40, east of shaft, at 100s. per fm.; the lode here is not looking quite so well, worth 18 cwts. of ore per fathom in ground hard for breaking. We have a good staff of men in cutting ground, &c., for the new line of rods, and the carpenters are busily employed in making pulley-stands and fixing the same. We shall sample on Saturday next 25 tons of silver-lead ore, for sale on Friday, the 12th inst. Hauling and dressing going on so fast as circumstances will allow. Machinery in fair working order.

NEW SOUTH MERLLYN.—R. Rowlands, Oct. 4: In the 80 south rise we have met with another swallow, which is now secured, and we shall commence exploring upon a branch of lead ore on the south side. Our other operations are looking very promising, yielding good stuff for dressing.

NEW TYLLWYD.—J. Harris, Oct. 2: The lode in the 20, in the cross-cut, is about 3 ft. wide, composed of clay slate, with several ribs of spar and lead intermixed; the lead seems to be getting more solid. The water coming from the forebreast is increasing, which will very likely unwater the winze when the level is driven a little further on

NORTH LAXEY.—John Sowden, Oct. 2: In the 146 the lode in the south end is 3 ft. wide, composed of spar, baryta, and a small quantity of lead. In the north end the lode is 2 ft. wide, composed of limespar and good stones of lead; this end is going up under the bunch of lead in the sole of the 121, and I am pleased to inform you that we have an improvement here; the lode at the deepest point—8 fms. below the 121—is 6 ft. wide, worth fully 30 cwts. of lead per fathom. In the 110 cross-cut there is a feed of water flowing from the end, which is a strong indication of a lode being before us. The two stopes in the sole of the 60 are each worth 15 cwts. per fathom. The stope in roof of the 60 is worth 1 ton per fathom. The 50 fm. level stopes are worth 10 cwts. per fathom. The lode in the 40 end is 1½ ft. wide, yielding saving stuff for the washing floors.

OOLA HILLS.—John Phillips, Joseph Phillips, jun., Oct. 3: Setting Report: The west end at the 23 to be driven, by six men, 4 fms. stent, at 5*l.* per fathom; the lode here is 3 ft. wide, composed of elvan, barytes, mundic, and lead. The latter mineral is improving as we advance westward, and we think we are near a new run of lead, as there is a decided change for the better in the end. The end driving west of No. 2 cross-cut on No. 1 north lode, at the 23, is re-let, to four men, 3 fms. stent, at 7*l.* per fathom; lode here 5 ft. wide, with two splendid walls, and, as we anticipated, we have now a fine rich lode for lead coming into this end, and we now know we have a long run of rich ground for lead before us. This is a grand feature, as this lode is standing in whole ground to surface, and all to the north of the old men's workings. In the end driving east of shaft, at the 30, the lode is 4 ft. wide, composed of beautiful light elvan, barytes, mundic, lead, and rich copper ore. I broke on Monday some good work for both lead and copper. This end looks as if we have not far to go before it will be a good lode both for lead and copper ores. Water is issuing freely from this end. Set to six men, 2 fms. stent, at 8*l.* per fathom. We shall soon be in a position to start to drive the levels, both east and west, on No. 1 north lode, at the 40, and the lode there, as far as seen, is from 9 to 10 ft. wide, and we believe a good lode for lead and copper ores will be the result after the ends are opened out on the lode a little distance. All other work is going on well. We have fixed a new winding-drum to the engine, and have the new wire-rope in position, and this erection with the engine is working admirably. Nothing shall be wanting on our parts to bring these mines a profitable paying state. We may add, in conclusion, the mines are now published, and cannot fail to become a profitable undertaking.

PANDORA.—H. Nottingham, Oct. 4: With much pleasure I have to inform you that we have cut into lead and blende in the 33 cross-cut east. The last shot fired threw out some soft rich-looking stones of solid lead. I expect this is a branch which we met with in driving the 18 and 23 cross cuts east a few feet before reaching the lode, and which forms a junction with the main body of the lode, which it makes No. 1 course of ore, and this is undoubtedly an offshoot from that lode. If so, it speaks well for this level. We have also a most favourable change to report in the 23 north, on Goddard's lode. The lode, which for some fathoms was entirely cut off, has suddenly opened out for what appears to be another course of ore. We have never seen the lode so open and loose except where it makes a good course of ore. It this is verified here, it will be a new run not seen before. I will write you more particulars as these points are opened up.

PARYS MOUNTAIN.—T. Mitchell, Sept. 29: I beg to hand you the settling report for October, from which you will see that all stoping operations have been suspended, although the various stopes will yield from 4 to 6 tons of copper ore per fathom, and from 1 to 2 tons of sulphur, but the present price of copper obtained precentedly low, the ore would scarcely pay for raising. Should a fair advance take place in the copper standard these stopes would pay well to work. The 90 fathom level cross-cut south has been set to six men, at 12*l.* per fathom. The ground at this point is much easier for driving, and has also undergone a change lately; it appears as if we were getting into a lode. The end is showing good stones of copper ore and sulphur, mixed with soft flookan, which also contains black oxide of copper. The end never looked more encouraging than at present. We have also set 10 tribute pitches to 20 men at the usual prices (which will average from 10s. to 12s. in 1*l.*. We have sampled this week two lots of ore (computed 240 tons). We hope to get the precipitate and another parcel of ore ready to sample in the course of a few days.

PARYS MOUNTAIN.—T. Mitchell, Oct. 4: The 90 south looks very promising. The ground is moderately easy, and good progress is being made in the drivage. Some of the tribute pitches are looking better. We shall have the precipitate and one parcel of copper ore ready to sample next week.

PATELEY BRIDGE.—C. Williams, Oct. 4: Since the date of my last report the 30 east on Rake vein has been driven 5 fms. 2 ft.; the vein in the breast is 6 ft. wide, and precisely of the same appearance and character as described, principally composed of fluor spar, barytes, and a good course of lead ore, worth of the latter 1½ ton per fathom; re-let to eight men for the month, at 6*l.* per fathom, the takers to pay all costs. The 30 west on the same vein has been extended 2 fms. 2 ft.; the vein throughout is of a masterly character, and contains for mineral produce, being 6 ft. wide, consisting of fine light gossan, carbonate of lead, barytes, and lead ore, yielding of the latter about 15 cwts. per fathom—re-let for the month to four men, at 6*l.* per fathom; ground rather tighter. The rise over this level is 6 ft. wide, and worth 1½ ton of lead ore per fathom, ground broken during the month 4 fms. I have put on four more men to bargain to stope the back to follow the east level; price for rising and stoping 5*l.* per fathom. The above three points produced on an average during the month about 27 cwts. of lead ore per fathom, or an aggregate of about 15½ tons of clean ore, and but for the repairs which we had to make to the engine, as stated in my report of September 13, and which necessitated the stoppage of work for some days, the produce would have been several tons more. The Lumb west on the south cross cut in the 20 west is 4 ft. wide, and worth 1 ton of lead ore per fathom; re-let for the month at 60s. per fathom. Fielding's vein over the 20 west is 2 ft. wide, and worth 15 cwts. of lead ore per fathom; re-let for the month to four men, at 60s. per bing, or 7*l.* 10s. per ton for clean ore. The Sun vein in the quarry, ansle and poor. The [illegible] clean ore. We sold on Friday last 30 tons of pig-lead, at 19*l.* per ton=570*l.* dressing and smelting are being proceeded with with all dispatch.

PENHANT.—Oct. 4: We continue to go down satisfactorily with the shaft, the lode is showing a well-defined wall. Before we can drive the 80 east further we must rise up and communicate with the 60, which will give us ventilation and open ground for stoping. The 80 west is looking very promising, producing large lumps of sulphur and blende, and letting out a quantity of water. The cross-cut south in the 80 is still in congenial ground. The two stopes in back of the 60 are producing better stuff than they have done for some time. Dressing going on satisfactorily.

PENSTRUTHAL CONSOLS.—William Polkinghorne, Sept. 29: The [illegible] Highburrow shaft sinking under the 27 still maintains its size and appearance as last reported. In the 72 driving east of Highburrow shaft the lode is without change. The lode in the 72 driving west of shaft is letting out a quantity of tin, and producing a little copper ore, and from its present appearance I anticipate early improvement. In the 58 cross cut south we are opening east on the Pelevan course mentioned in our last report; it is producing tin, but after only a little further on its course we shall be able to speak more definitely of its value. In the cross-cut driving south at the 46 fm. level, west of shaft, we have met with anything yet worthy of remark. We shall sell on Thursday next 20 tons good quality copper ore. Our tributers both on tin and copper are working well.

PRINCE OF WALES.—John Andrews, Oct. 3: The lode in the stope in back of the 24 is much the same as it has been for a week or two past, the part of which continues to yield some good work for silver.

ROMAN GRAVELS.—A. Waters, Oct. 4: In the 106, north of flat rod, the men are rising against the winze from the 96, and hope to get a bore through next week. The 106 south is gradually improving. The 95, south shaft, is getting through the twitch into more productive ground. The 93 is worth 1 ton of lead ore per fathom. The 70, north of Powell's winze, is 3 tons per fathom. The 65, south of Stokes's, is worth 3 tons of lead per fathom, and improving. The winze below the 50, south of Stokes's, is 3 tons per fathom. The stopes throughout the mine are yielding ore as for some time past.

SAINT PATRICK.—Wm. Francis, Oct. 3: Finding the soft ground under the black limestone does not extend westward we have resumed driving the 10 fm. level cross-course northward, and there is evidence of a favourable change coming in at the end, where the cross-course seems likely again to open out. The ground is still very favourable for driving in the 60 yard level cross-cut, but tighter than it has been, though quite as congenial for ore deposits.

SOUTH CONDURROW. Rich, Wm. Williams, H. Abraham, Oct. 3: The sinking of the Plantation shaft below the 20 is resumed. The 30 end, west of Vivian's, is rather harder than it has been. The 40, east of King's, is worth 8*l.* per fathom. The 40 west carries stones of tin. The 50 east is worth 10*l.* per fathom. The 50 west yields a little tin. The 60 end west is worth 12*l.* per fathom. The 70, on the copper lode, is worth 12*l.* per fathom. The rise in back of the 70, in the Plantation shaft, is in the tin lode, which, so far as seen, appears to be worth 20*l.* per fathom. The rise in back of the 60 is worth 18*l.* per fathom. The stope is worth 9*l.* per fathom. The 93 west is worth 8*l.* per fathom. The stope and pitches throughout the mine are yielding much as usual.

SOUTH DARREN.—H. James, A. Gundry, Oct. 2: We have again forced the water out of the 90, and the men have resumed their bargain in the 90 stope. The lode here is looking well, value 26*l.* per fathom. The 80 end is at present suspended, but will be resumed as soon as the men finish putting in a stull in the back of the 80, to cut in the deads. No. 1 stope in this level continues to open out well. No. 2 stope is worth 8*l.* per fathom. All the other stopes continue the same in value as last reported. The shaftmen have finished putting in the under the 40 plunger, and are now repairing the shaft from the 40 to the 50. The work for the engine is progressing favourably, the weather being very fine. Samples of 25 tons of silver-lead ore were sent off yesterday, for sale on the 6th inst.

SOUTH ROMAN GRAVELS.—John W. Powning, Oct. 3: Shelfield: The lode in the 45 end, east of shaft, is about 4 ft. wide, composed chiefly of ochre, lime, patches of blende and lead, but not sufficient of the latter to value; it is a promising a looking lode as one could wish to see, and I shall be greatly surprised if we do not soon meet with a good run of ore. This end is being pushed on by six men, and is now forth about 22 fms. from shaft. The 45 west is also pushed on by six men, and is driven about 18 fms. We do not know the width of the lode here, but shall cut across it next week; the portion stripped is composed of limespar and dark slate. We have the machinery and pitwork in good condition, and working well. The 45 fm. levels are being pushed on as the shoot and west to the boundary as fast as possible.

SOUTH TOLCARNE.—W. Rich, W. Hambly, Oct. 3: The sinking of the shaft on the copper lode is being urged on below the 24 by six men; the lode has good stones of rich copper ore. The water is very easy, and the cost of pumping will be much less than it has been. The lode in the 24 west is composed of spar and good spots of copper.

TALYBONT.—T. Glanville, Oct. 4: No. 2 Lode: The lode in the 17, east, is producing some good stones of ore, and by its present appearance to get into paying ore ground very shortly. On the branch driving east from the north cross cut we have leaders of lead and blende dispersed throughout the forebreast; I have no doubt we shall cut into a good course of ore long.—No. 1 Lode: The lode in the deep adit level, driving west, is producing some good stones of lead, but not sufficient to value.—North and South Lode: The lode in the adit level, driving north, is 2½ ft. wide, composed of a fine slate, intermixed with spar and some spots of lead ore.

TANKERVILLE.—Arthur Waters, Oct 4: No change worthy of notice in the mine since my report last week. Full report and setting-list on Thursday next.

TOLGUS CONSOLS.—W. C. Vivian, Oct. 4: In sinking below the 22 fm. level on the north branches, we have strong veins of quartz and copper ore, the latter being rich yellow and variegated; the lode is unsettled, but the appearances are improving in going down, as well as the highly congenial nature of the surrounding ground leave no doubt on my mind that we are right over a large copper formation, and may be able to sink 2 or 3 fathoms which may throw such light on the prospects in depth as to induce us without hesitation to commence cross cutting at the 40 fm. level. By sinking on the north parts of the lode, which are the most productive of copper, we shall come down on the south parts on account of the rapid underlie of the latter. We have some hundredweights of quartz and ore at the surface sent up during the last two or three drawings.

TREBEIGH CONSOLS.—J. Gifford, Oct 4: Ward's engine-shaft is now down 3 ft. below the 30, and we hope to get it to the proposed depth, 45 fms. from the face, by Thursday, the 13th inst., to commence driving the cross-cut north to the lode. The ground in the bottom of the shaft is strongly mineralized with quartz and sulphuric mundic, and very promising for the production of ore.

TRESELLYN.—T. Hodge, Oct. 3: The winze sinking in the bottom of the junction is down 2 fms. 2 ft.; the lode therein is 2½ ft. wide, worth over 20*l.* per fathom, and improving. In the No. 3 end east the lode is 2 ft. wide, worth 7*l.* per fathom for tin. I expect in 3 or 4 fathoms further driving to double its present value. I advise the erection of stamps to enable us to sell our tin, so as to assist us in our further development. Our prospect are indeed good. The winze at the price of tin two years ago would have been worth 50*l.* per fathom. As tin is going up and lode improving the mine will soon pay its way.

TYN-Y-FRON.—Evan Jones, Oct. 2: We are continuing the cross-cut to the eastern level south as directed by Capt. Francis, where we find the lode very strong, but getting harder. We are in about 6 ft., and cannot touch the back of the lead, blende, and spar; a very good mixture of lead, but not much blende. We can hardly estimate its value, as it is making across the lode; but if it continuing on the same run as the lode it would be 7 to 8 cwts. of lead to the fathom. We shall continue to cross-cut until we have got through the lode, before which we hope to meet with a joint that will turn the ore with it. I hope the spar from the winze and back of the level east of same please you.

VALE OF CONWAY.—J. Roberts, Oct. 3: The east and west lode is disordered by a cross-branch, and is not quite so good as last week, worth 15 cwts. of lead to the fathom. The lode in the winze is very much of the character and value. The lode in the bottom of the old mine is producing

... of lead, but not as yet sufficient to value. I hope that we shall be able to ... the machinery to work in a fortnight more.

WEST GODOLPHIN.—J. Pope, Oct. 3: All being well we shall start the new ... to work to-morrow. There are only two men working on ground now—that ... the deep adit west; the lode is 3½ ft. wide, producing low price tinstuff. ... the water will soon be drained out of the mine again, and the men ... their different places of work.

WEST PATELEY BRIDGE.—D. Williams, Oct. 1: The 86, upon Craven cross-... has been extended during the month about 6 fms., and is 97 fms. west of the ... adit level, now within about 13 fms. of the rich ore ground referred to in my ... reports. The vein in the present end is over 5 ft. wide, the leader or ore-... part being fully 12 in. wide, composed of clay, gossan, spar, and lead ore, ... fully 12 cwts. per fathom. The north cross-cut from this level is extended ... fms. upon the cross vein, which is at present in a knotty piece of ground, ... may at any time open out into a good vein again. The Craven cross shafts ... opened and secured to a depth of 13 fms. each below surface. In the driv-... from No. 1 shaft the vein is 18 in. wide, consisting of spar and barytes, ... with patches of lead ore, worth about 6 cwts. per fathom. No. 2 shaft ... upon the Golden Fleece vein, is down about 19 fms. The vein in ... surface, ... is over 3 ft. wide, its component parts being gossan, limespar, and lead ... worth 30 cwts. per fathom. We shall continue the sinking about 2 fms. more, ... that depth drive two levels north west and south-east upon the vein, thus ... a section of profitable stoping ground. On surface we have completed the ... smith shop and the crusher, and have commenced dressing, and hope to have ... soon a parcel of ore for smelting.

WEST BOSKEAR.—H. Stephens, W. Bennetts, Oct. 4: We got the new lift to ... on Saturday, and the water is now drained 4 fms. 3 ft. below the 12. Every-... is working very satisfactorily.

WEST TANKERVILLE.—Arthur Maters, Oct. 4: The 86, south of boundary ... is in a lode 5 ft. to 6 ft. wide, and worth 1 ton of lead ore, and ½ ton of ... per fathom. The 86, north of cross-cut, is worth 15 cwt. of lead ore per ... The 75 south is in a lode 5 ft. wide, worth about ton of lead ore per ... The three stopes in back of this level are worth, on an average, 1 ton of ... ore per fathom each. The 63 cross-cut, east, 2½ ft. into the big lode; no ... the hanging wall. As far as we have cut in the lode shows good ore stuff. ... shall be able to report fully on this point next week. We have to-day sold ... tons of lead ore, realising 428l. 15s., and have sampled 20 tons of blende for ... on Thursday next.

WEST WHEAL TOLGUS.—Oct. 3: There is no alteration to notice in the ... in Taylor's shaft or plat. The lode in the 145, west of shaft, is still hard ... with less ore than when last reported, now yielding about 2 tons per fm. ... calculate on having some fathoms of hard, poor ground to drive through in ... and before getting into the great lode of ore we drove through in the 135 fm. ... Since our last report we holed the rise to the No. 5 winze; the lode where ... is better than in any other part of the winze. The risemen are now set to ... the 135, west of the rise, at 8l. per fathom; lode 5 ft. wide, yielding 3 tons of ... per fathom. The winzemen are put to sink a winze under the 115, in a good ... lode, some fathoms west of the 125 end: we shall be able to say more about ... value of the lode in our next. The lode in the 125 west is just the same as it ... last week—about 4 ft. wide, yielding 4 tons of ore per fathom. We think ... is a good chance of the ore in this end continuing until it gets under the ... now commenced in the 115. The winze in about 8 fms. before, or west of ... end.—Richards' Shaft: Lode continues large, but with very little ore. ... has not been much done in the 95 end west or 55 end east since our report ... week, the men having been employed about the pipes in the 95, raising stones ... the quarry, assisting engineers, masons, &c. The lode in the 75 west continues ... and poor. The same may be said of the 65 west.

WHEAL CREBOR.—John Andrews, Oct 2: In the 120 east we are still driving ... the side of the lode, but we shall begin to take it down in a day or two. The ... in the stope in back of the 120 is 5 ft. wide, worth 15l. per fathom. There is ... change in the 108 east. The two stopes in back of the 108 are worth 10l. per ... each. The lode in the 72 east is 2 ft. wide, and yields a little mundic, but ... for copper. The noorth part of the lode in the 48 east carries mundic and ... copper ore, but not enough of either to value. We sampled on Sept. 29 ... tons of copper ore.

WHEAL KITTY (St. Agnes).—S. Davey, R. Harris, Sept. 29: New Shaft—... Lode: The lode in the 154, driving west of the shaft, is large, and more ... as we get out of the influence of the gossan, and is producing saving work ... stamps. The lode in the 142, driving west of the shaft, is improving as ... advance, now 4 ft. wide, and worth for tin 10l. per fathom. The lode in the ... driving east of shaft, is also showing signs of improvement, now worth for ... per fathom. The lode in the 130, driving west of the shaft, is worth for tin ... per fathom. The lode in the 118, driving west of the shaft, is 2 ft. wide, and ... for tin 7l. per fathom.—Old Lode: The lode in the 100 fm. level, driving ... of the engine-shaft, is 2 ft. wide, and worth for tin 8l. per fathom. The lode ... driving east of engine-shaft, is worth for tin 5l. per fathom.

WHEAL NEWTON.—H. Bennett, Oct. 4: The lode in the 44, west of the engine-... has a very promising appearance, and we are expecting an early improve-... We have commenced to sink in the bottom of the 40, west of Cook's shaft, ... we have some good stones of silver ore. We are now engaged timbering ... of Hampton's shaft, and will forthwith commence to sink on the course ... lode. All other points of operation remain without change worthy of notice ... last reported on.

WHEAL PEEVOR.—W. T. White, Jos. Pryor, Sept. 29: Setting Report: We ... intersected the lode in the 80 cross-cut, and have cut into it 5 ft.; as far as ... it has a most promising appearance, and produces good stones of tin. We ... be able to say more about this lode in the course of a few days. We set eight ... to drive west and cut through the lode, at 6l. per fathom, and the remaining ... men are engaged in fixing ladder road, &c., from the 70 to 80 fm. level. ... to drive west on the south lode, by six men, at 6l. per fathom; the lode is ... per fathom. Nos 1, 2, and 3 stopes, in the back of this level, by 12 men, ... per fathom each; the lode is worth on an aggregate 27l. per fathom. ... to drive west, on the south lode, by four men, at 4l. 5s. per fathom; lode ... per fathom. The rise in the back of this level, by six men, at 6l. per ... the lode is worth for length carried (12 ft.) 50l. per fathom. This rise is ... 9 fathoms from the 60 fm level, or near the 48, consequently we know ... well what the nature of the lode will be when intersected by the cross-cut ... in the latter level. Nos. 1, 2, and 3 stopes, in the back of the 60 fm. level, ... men, at 2l. 10s. per fathom each; lode worth respectively 10l. per fathom. ... to drive south in the 48, by six men, at 7l. per fathom; we hope to in-... the south lode in this cross-cut, and give ventilation, &c., to the rise referred ... the back of the 60 the latter part of this month. Our tribute setting is next ... We are pleased to say the mine continues to open up satisfactorily, and ... monthly raising is about 30 tons of tin.

WHEAL RUSSELL.—John Bray, Oct. 4: There is no improvement to notice ... the lode in the 25, or the tribute pitches since last report. We shall sample ... over 30 tons by the end of this month.

WHEAL UNY.—William Rich, Matthew Rogers, Joseph Rich, Sept. 29: The ... west is worth 10l. per fathom. The rise in the back of the 160 east to-... Goodinge's shaft carries a little tin. Hind's shaft below the 160 is worth ... per fathom for the length of the shaft. The 150 west is worth 8l. per fathom. ... east is worth 7l. per fathom. The lode in the bottom of 140, west of in ... shaft, is worth 15l. per fathom. The 140, east of King's, is worth 9l. per ... The 130 east is worth 7l. per fathom. The back of the 60 west is worth ... per fathom. We have sold to-day 17 tons 16 cwts. 1 qr. 3 lbs. of tin, the pro-... of the past fortnight.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Bahia, Oct. 1: Pro-... fifteen days, second division of September, 15,250 oits.=5909l. Yield unin-... the oitavas per ton.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: ... run, $60,000 from 750 tons of ore (two furnaces); week's produce of refining, ... Struck rich ore in 200 southerly drift to-day; now continuous between ... and fourth levels.

—R. Rickard, Sept. 11: The new stope in the 400 level is opening out well; ... a fine breast of very good ore. As far as seen it is about 12 ft. wide: ... very promising to make a large body of ore. The 400 main drift is still ... drifted on the quartzite in low grade ore. The same level north has been ... 30 ft., in very fine ore. The 200 is still in hard limestone. The 600 west ... getting better; the ground is softer, and looks more favourable for ore. There ... nothing new in any other part of the mine.—Smelting: Two furnaces were ... on the 5th inst., and I am glad to say that everything is working very ... the furnaces are doing good work, and the machinery is in first-rate order. ... shall start the refinery on Monday next.

FRONTINO AND BOLIVIA.—The directors have advices (Aug. 13), accom-... by a remittance of gold, valued at 1833l., the produce of the mines, and for ... purchased at the mines for the month ending July 20 last. The accounts ... a profit of 243l. 3s. 6d. In addition to the monthly cost of 1024l. 15s. 11d., ... 15s. 5d. has been expended on capital account. From the mine accounts of ... Silencio Mine it appears that only 24¼ tons of mineral were taken from that ... and that this produced no less than 44 ozs. of gold (2 ozs. per ton nearly). ... Restrepo, the company's bankers, report that "they are in hopes that soon ... the mines will give a good yield, and that the company will have an epoch of ... prosperity.

ANTIOQUIA (Frontino).—The directors have advices (Aug. 14), accompanied ... remittance of gold, and the accounts for June and July. The result of the ... months' working shows a loss of 282l. 11s. 4d. In addition to the above cost ... 4d., 131l. 18s. 3d. has been expended on capital account. Although the ... accounts for June and July show a loss of 282l. 11s. 4d. the mine is evidently im-... clean mineral from the leader in the new shaft having on assay produced ... less than at the rate of 8 ozs. per ton. The directors have great hopes that ... the mine will begin to develope itself into a profitable mine.

NEW BENSBERG.—Charles Craze, Oct. 1: Victoria shaft was sunk in last ... 1 fm. 2 ft. 6 in.; this may be considered first-rate speed seeing we have so ... water and two heavy lifts to drop. The lode here is improving as depth is ... gained, the last 6 ft. sunk having produced more ore (lead and blende) than any ... other 6 ft. sunk in the shaft, and is now worth 1½ ton of lead ore, and 3 tons of ... per fathom for length of shaft. We are putting forth every effort to get ... shaft down for another level as soon as possible, when, judging from the ... and masterly appearance of the lode here and in the 22 west we may expect ... valuable course of ore. The 22, west of this shaft, was driven in September ... 3 ft. 4 in. This end is now 8 fms. 2 ft. from shaft, and for the whole dis-... the part of the lode carried has produced good dressable stuff for both lead ... blende, while the present has a splendid appearance, and will produce 1 ton ... good lead ore and 2 tons of blende per fathom, with good ore ground standing ... north and south. We are continuing the cross-cut north through the lode ... this end, where we are already in nearly 5 fms., and no wall. The part of ... the forebreast here is looking well, composed of a very pretty gossan, car-... of lead, galena, and blende, and worth 10 cwts. of good lead and 1 ton of ... per fathom. I may remark here that the lode at this level shows very con-... able improvement upon the 14, inasmuch as it is very much larger, and con ... more lead with less pyrites (valueless, which makes it difficult to dress), while ... there is so much blende, which is likely to become an important item in our ... returns. At the 22, east of this shaft, the lode has been disordered by a cross-... and in the last month we have cross-cut north about 2 fms., and south 3 ft., ... if we could find a better part. Up to the present we have met with two or ... branches containing good stones of lead and blende, but not of any value. ... shall continue the drivage north, as I think we should meet with the good part ... there is in our western cross-cut in this direction. The 14, east of shaft, was driven ... 3 ft. in last month. This end is looking very well, indeed, with some good patches of lead in it, and some blende, which shows that as we push on our 22 east under this we may expect to have a good piece of valuable ore ground, this end being over 25 fms. in advance of the 22. We have continued our searches for carbonate at surface, but have not yet met with any. In conclusion, I may add that it is now only four months since the bottom of the mine was drained, and our speed in developing the mine during that time has been first rate. We have proved beyond a doubt that we have at the 22 a masterly and fine-looking lode, with a fair percentage of lead and blende throughout, which is a grand improvement upon the 14, and should the lode improve at the next level (32) in proportion you will have a property here equal to your most sanguine expectations.

EXCHEQUER (Gold and Silver).—L. Chalmers, Sept. 10: I succeeded, as you will see from the accounts, in getting a few men to clear our caved places, so as Mr. Sewell might have access to every part of the mine for a thorough examination. That work is not yet completed.

I. X. L. (Gold and Silver).—L. Chalmers, Sept. 8: Enclosed is the foreman's report. I think we are near a discovery in the shaft.—Foreman reports Sept. 8: The wood road is completed, the machinery and boiler repaired, and have been in good running order the last four days, hoisting and pumping water from the shaft, which was full of water from the 200 to the bottom; 108 ft. of water to handle, and is now making water very fast. It is now all out and the bottom reached. We are prepairing to put in the station timbers, also 100 ft. of guides, so as to hoist the dirt from the said station with the cage; all this will be done by Monday evening next. Next week will be sufficient to cut out the station, sink the sump and lower the pump from the 200, then we shall be able to go on with sinking as before. There are indications of tapping a ledge in the shaft, probably the main I X L lode. Everything in and about the mine is running and working well.

ARGENTINE COMPANY.—Report for July: The ore from Oxland's calciner, according to the experiments made by Mr. Oxland, has yielded good results, but owing to the extreme hardness of the calcined ore from the bottom of the Pique, and the feeble grinding action of the present arrastras, it does not appear to be possible to treat the ore with sufficient rapidity. Another great obstacle is the difficulty of drying the ore, and more especially so in the wet and unsettled weather lately experienced, so as to bring it to a fit state to enter the calciner. The adoption of the grinder pans, &c., recommended by Mr. Oxland, will remove all these difficulties. Bar gold obtained in 26 days' run from 350 tons of ore, 216 799 ozs.

PESTARENA UNITED.—The returns during the last month are as follows:—From Pestarena district 175 ozs. 14 dwts. 6 grs. gold from 183 metric tons of ore; yield per ton, 19 dwts. 4½ grs.; from Val Toppa district 141 ozs. 9 dwts. 17 grs. from 367 metric tons; yield per ton, 7 dwts. 17¼ grs.: total from both districts 317 ozs. 3 dwts. 23 grs. from 550 metric tons of ore amalgamated.

ECHOES FROM THE MINING MARKET.

The aspect of the Mining Market has been far more lively than last week; for with a further rise of 3l. per ton in the tin standards—making an advance of 5l. in about a fortnight—and a better inquiry for lead, both tin and lead shares have been in demand. The enquiry for the former class has been, however, the predominant feature of the week, and for shares of the leading mines it has been characterised by some amount of excitement. Thus, Dolcoath from 25, 27 have risen to 30, 32; Tincroft, from 9l., 10l. to 12l. 13l.; Carn Brea, from 21, 23 to 29, 31. Compared with the prices ruling a fortnight since, the addition to the value of each Dolcoath share is 7l.; to Carn Brea, 10l.; and to Tincroft, 3l. It is said that a further rise in the standards is not an improbable event. Were this to become a fact there would be an almost wild demand for tin shares. The advance has been looked for so long, and the turning-point is believed by so many to have been already passed, that orders would be placed on the market at once to buy shares at whatever price they were procurable. The rise in tin is a great boon to Wheal Agar, a mine to which we drew the attention of investors a week or two back. The shares should be looked well after, as the mine bids fair soon to rank amongst the best of the county. Low-priced tin shares should also be kept in view, as in these the room for cent. per cent. advances is ample.

The annual report of the Rookhope Company shows some encouraging progress made during the past few months. During the last quarter the mine has been worked at a small profit, and the present month's sampling has amounted to 50 tons of lead ore. The directors state that they are paying particular attention to the dressing machinery, and hope that improvements to be introduced will enable returns to be materially increased, as more stuff can then be treated. The directors have had some thoughts of developing the Brandon Walls Mine, comprised in their sett, but upon consideration it has been decided to limit operations for the present to the Stotfield Burn Mine, from which the results now published have been obtained. The different ends valued in Mr. Blenkiron's report accompanying the directors' statement, are stated to be worth in the aggregate 3 tons 15 cwts. of lead per fathom. Mr. Blenkiron estimates the reserves of ore between the 25 and the 42 at 1250 tons. Of course this is a mere matter of opinion, but as the manager is known to lean more towards an understatement than an over-statement it probably represents a fair estimate of what may be expected in developing the ground. Crediting capital not yet paid up (2667l.), the balance in favour of the company is 2220l. It is to be hoped that Rookhope will not only continue to earn its way, but will commence to make fair profits, as the credit margin is not very considerable, and a lower price for lead or a falling off in the ends might materially reduce it. The shares close 18s. to 20s.

Out of the required subscription for 17,500 shares in the proposed United Van Consols and Glyn Mining Company (Limited) about 6000 up to the present moment have been applied for. This number is, of course, insufficient to take over both mines, pay the liabilities, and provide the necessary working capital, so the secretaries of each company have issued a joint circular appealing for an augmentation of the subscription list. The latter will remain open until the 11th inst., when the committees of both mines will meet to decide what steps shall be taken at the adjourned meetings to be held on the 24th inst.

A further rise has taken place in Parys Mountain shares, and they close at 9s. to 11s. The advance is primarily due to the result of the meeting last Monday, when it was announced that out of the 7000 shares it was necessary to issue to start the Morfa Du Company, over 6000 had been subscribed. There appears, therefore, every chance of the scheme being carried, and as the petition against the Parys Mountain Company, to be heard on the 3rd prox., will, it is confidently expected, be dismissed, the shareholders at almost the eleventh hour have seen a way out of their difficulties. When the requisite money has been assured to Parys Maintain the whole energy of the management should be concentrated on the driving of the cross-cut at the 90, so as to get under the great open-cast at the earliest moment.

A meeting of Marke Valley adventurers will be held on the 10th inst., when a call of at least 3s. per share is expected. The mine is returning large quantities of ore, but is unable to pay costs owing to the low value of copper.

At the close of the market tin maintains its price, and statistics show that the stocks of the metal here have decreased 821 tons during the past month. This is a healthy sign, and, therefore, an encouraging one. At the same time, we should be inclined to indulge in more hopeful views as to the immediate future of the market could we discern any symptoms of a revival in trade. As yet no signs of increased demand (beyond a certain speculative movement, which is quite apart from the legitimate requirements of trade) are apparent, and, therefore, the element to support the present improvement is apparently wanting. But as we have already stated, many believe the Cornish standards will further improve. The question is—Can they be maintained?

In the foreign share market business has been very quiet. A fall has taken place in Chicago shares, in consequence of statements affecting the position of affairs at the mines.

JAMES H. CROFTS.

ERRATUM.—With reference to our remarks last week as to the advantages of machine borers in mining operations, there was a printer's error. It should be—"a great deal too, must (*not* much) depend upon the solidity and tightness of the carriage fixed below, so that the blow may be delivered on the rock fairly, without slipping or other movement."

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week there has been rather more business doing. The revival in business, however, makes but slow progress, as might be expected after so long depression, for, as a rule, only a few have the courage, or sometimes the fortune, to buy at the right time—that is, while prices are low; but, on the other hand, thousands will rush in to buy right and left as soon as buoyancy and confidence are imparted from the inevitable great rise in prices. In shares of iron and coal concerns the only movements on the week are reductions on Ebbw Vale of 2s. 6d. per share, and on Omoa and Cleland of 6d. Ambergate are at 80s. Andrew Knowles and Sons, 22s. 6d. prem. Bilbao, 19½. Bolckow, Vaughan, A, 54¼ to 54⅜; ditto, B, 34; and ditto (preference), 19¼. Cardiff and Swansea, 20s. to 25s. Carnforth, 117½. Chillington, 60s. to 70s. Consett, 19⅞. Darlington, 11¾ dis. Gardden Lodge, 100. Great Western, 40s. G. and J. Brown, 3 s. John Bagnall and Sons, 65s. Mersey, 30s. dis. Nant-y-Glo and Blaina (pref.), 20½ to 21½; ditto (deferred), 30s. Newport and Abercarn, 87s. 6d. New Sharlston (pref.), 70s. North of England Industrial, 65s. Norwegian Titanic, 40. Oakham, 10s. Pelsall, 12½ dis. Scottish Australian, 35s. to 40s.; ditto (new), 7s. 6d. to 10s. Sheepbridge, 9⅝ dis.; ditto (new), 9—both ex div. Skerne, 5½ to 6. Spon Lane, 7 dis. Staveley, A, 26; ditto, C, 84; and ditto, D, 14¾—all ex div.; ditto, B, 90s. prem., cum div. Thorp's Gawber, 70s. to 80s. Tredegar, A, 16. Tunbridge, 9. Ulverston, 10. West Cumberland, 7½. West Mostyn (deferred), 5. Whitwick 6 per cent. (pref.), 10½. Workington, 15,

In shares of foreign copper concerns, Cape have fallen 40s., Tharsis (new) 5s., Canadian 2s. 6d., and Huntington 6d., while Tharsis (old) have advanced 12s. 6d. and Panulcillo 5s. Tharsis are in better request, as the second half of the dividend of 20 per cent. is due in about a month. Huntington dull. Condes of Chili are at 6 s. Fortuna, 5¼. Panulcillo, 21s. 3d. to 26s. 3d. Rio Tinto 5 per cent., 58¾. Yorke Peninsula (ordinary), 2s. 6d. to 7s. 6d., and ditto (preference) 17s. 6d. Shares of home mines are quiet, except those of tin mines, which have been in request at a good advance. Bampfylde at are 7s. 6d. Bryn Alyn, 9. Combmartin, 6s. Glyn, 11s. 3d. Glenroy, 18s. 9d. Great West Van, 3s. 9d. Gunnislake (Clitters), 30s. Holmbush, 35s. Killifreth, 2s. 6d. to 7s. 6d. Leadhills, 5¾. Monydd Gorddu, 40s. North Laxey, 12s. 6d. to 15s. Parys Mountain, 10s. 6d. Prince of Wales, 5s. 6d. Rookhope, 19s. to 20s. South Condurrow, 7¾. Tankerville, 5¾. Van Consols, 10s. West Combmartin, 3s. 6d. Wheal Agar, 70s. to 80s. Windsor Clive, 40s. Wye Valley, 52s. 6d. In shares of gold and silver mines there is no movement. The Richmond run of this week shows an increase of $3000 again, being $60,000. Almada are at 7s. 6d. Antioquia, 12s. 6d. Cedar Creek, 10s. Chicago, 30s. Emma, 1s. 3d. to 3s. 9d. Exchequer, 4s. Flagstaff, 47s. 6d. Frontino, 65s. Gold Run, 10s. I X L., 6s. Last Chance, 20s. Port Phillip, 10s. Santa Barbara, 25s. to 30s. South Aurora, 4s.

Shares of oil companies are steady. Young's Paraffin have lost 7s. 6d. per share of last week's rise, and Uphall 5s., while West Calder have improved as much as 25s., and Oakbank 1s. Runcorn Soap and Alkali are at 5½ dis. In shares of miscellaneous companies the only alteration is a reduction of 1s. 3d. per share on Phospho-Guano. Earle's Shipbuilding are at 6¼; General Sewage, 8 dis.; Gloucester Wagon, 10⅝ to 11; Hopkins, Gilkes, and Co., 7¾ dis.; Langdale's Chemical, 75s. to 77s. 6d.; Lawes' Chemical, 7 to 7⅛; Milner's Safe, 8 to 8¼; Newcastle Chemical, 42s. 6d.; North of England Wagon, 83s. 6d.; Palmer, B, 14½ dis.; and Phospho Guano, 10l. 16s. 3d.

The following are the rates per cent. yielded on investments at present prices, calculated on the average yearly dividend, for a few of the principal companies shares:—Coal: Arniston nearly 6⅝, Benhar nearly 6¼, and Cairntable fully 11¾. —Oil: Dalmeny nearly 5⅛, Uphall 8, and Young's Paraffin nearly 10. Tharsis would yield about 9, and the new shares nearly 9⅛. Phospho-Guano about 9¼. Scottish Wagon nearly 5¾, and ditto (old) nearly 5⅛. Leadhills would yield 12. These shares have been in more request since the issue of the directors' report and accounts, with agent's report, which show that the concern must continue to pay large dividends, but the public cannot have any idea of this for a considerable time, nor of the rise in price the shares will have.

Subjoined are this week's quotations, &c., of mining and metal shares quoted on the Scotch Stock Exchanges:—

Capital. Per share.	Paid up.	Dividends. Rate per cent. per annum. Previous.	Last.	Description of shares.	Last price.
				COAL, IRON, STEEL.	
£10	£8	£ 8½	£ 6½	Arniston Coal (Limited)	8
10	10	6	6	Benhar Coal (Limited)	7l. 8s. 6d.
10	10	6	6	Ditto	7l. 8s. 6d.
100	50	18s 9d† ‖	41s 6d ‖	Bolckow, Vaughan, and Co. (Lim.) ...A.	54½
10	10	10	10	Cairntable Gas Coal (Limited)	8½
10	10	nil	—	Chillington Iron (Limited)	70s.
32	20	nil	nil	Ebbw Vale Steel, Iron, and Coal (Lim.)	9½
10	5	nil	nil	Fife Coal (Limited)	60s.
10	10	nil	nil	Glasgow Port Washington Iron & Coal (L)	35s
10	10	—	—	Ditto Prepaid	[illegible]
10	10	—	—	Lochore and Capledrae (Limited)	
10	10	nil	3	Marbella Iron Ore (Limited)	[illegible]
10	10	nil	nil	Monkland Iron and Coal (Limited)	[illegible]
10	10	5	4	Ditto Guaranteed Preference	5
100	100	nil	nil	Nant-y-Glo & Blaina Ironworks pref. (L)	21
6	6	nil	nil	Omoa and Cleland Iron & Coal (L. & Red.)	30s.
1	1	17½	15	Scottish Australian Mining (Limited)	40s.
1	5s.	17½	15	Ditto New	8s. 9d.
Stock	100	nil	nil	Shotts Iron	91
				COPPER, SULPHUR, TIN.	
4	4	—	—	Canadian Copper and Sulphur (Lim.)	5s.
10	7	40	40	Cape Copper (Limited)	35
1	1	15	7½	Glasgow Caradon Copper Mining (Lim.)	23s.
1	15s.	15	7½	Ditto New	16s.
10	9¾	nil	nil	Huntington Copper and Sulphur (Lim.)	28s.
25s.	23s.	—	—	Kapunda Mining (Limited)	6d.
4	4	—	—	Panulcillo Copper (Limited)	25s.
10	10	6	6	Rio Tinto (Limited)	72s. 6d.
20	20	7	7	Ditto, 7 per cent. Mortgage Bonds	14½
100	100	5	5	Do. 5 p.ct. Mor. Deb. (Sp. Con. Bds.)	58¾
10	10	nil	nil	Russia Copper (Limited)	40s.
10	10	22½	20	Tharsis Copper and Sulphur (Limited)	22⅞
10	7	22½	20	Ditto New	15⅛
1	1	—	—	Yorke Peninsula Mining (Limited)	5s.
1	1	—	—	Ditto, 15 per cent. Guaranteed Pref.	17s. 6d.
				GOLD, SILVER.	
1	1	—	—	Australian Mines Investment (Limited).	8s. 9d.
5	5	7s. 6d ‖	7s. 6d ‖	Richmond Mining (Limited)	5
				OIL.	
10	7	6	6	Dalmeny Oil (Limited)	8¼
1	1	7½	25	Oakbank Oil (Limited)	46s. 6d.
1	5s.	—	25	Ditto	12s.
10	10	2½	7½	Uphall Mineral Oil (Limited) "A"	9½
10	10	—	—	Ditto "B" Deferred	10
10	10	—	—	West Calder Oil (Limited)	75s.
10	8⅛	9	17½	Young's Paraffin Light & Mineral Oil (L).	15
				MISCELLANEOUS.	
50	25	5	6	London and Glasgow Engineering & Iron Shipbuilding (Limited)	25½
20	14½	—	—	Peruvian Nitrate (Limited)	10
7	7	20	10†	Phospho Guano (Limited)	10/16s3d
10	10	6	6	Scottish Wagon (Limited)	11¾
10	4	6	6	Ditto New	87s. 6d.

† Interim. ‖ Per share.

Last day for this account, Oct. 9; settling day, Oct. 12.

NOTE.—The above lists of mines and auxiliary associations are as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Oct. 4.

THE WEEK.

SATURDAY, SEPT. 29.—In the mining market the bidding for Parys Mountain was the prominent feature. The shares advanced to 9s., and very few were offered at that. Port Phillip was dealt in at 9-16ths, and Leadhills at 5¼. Tin shares were slightly better, and there was a moderate enquiry for Wheal Grenville and Penstruthal. The dividend of 12s. paid by Van must be considered very satisfactory, the Burry Port loss having had to be provided for. Alamillos, Fortuna, and Linares pay the same dividends as were declared in March last, being 1s., 6s. 8d., and 9s. respectively. The Linares dividend is at the rate of 30 per cent. In railways, Metropolitan advanced to 114, and Brighton, A, was a firm market at 113, in anticipation of a good traffic return on Monday. Erie shares, $11¼ to $11½. Central New Jersey, $15 to $17.

MONDAY.—In anticipation of a good traffic return Brighton, A, was put up to 114, but when an increase of only 1131l. was shown the stock declined to 113. North British was a strong market, and rose to 88¾ ex div. Grand Trunk securities were firm, and quoted thus—shares, 9 to 9¼; First Preference, 46¾ to 47¼; second, 30¾ to 31; third, 18 to 18¼. At a Parys Mountain meeting to-day it was stated that of the 7000 Morfa Du shares that required to be taken to justify going on over 6000 had been applied for. More were taken in the course of the meeting, and apparently the difficulty is at an end. Parys Mountain shares left off 9s. to 11s., and a good deal in demand. Rookhope, 18s. to 20s.; South Roman Gravels, ⅜ to ⅝; North Laxey, 12s. to 14s. There was a relapse in Leadhills, which were offered at 5¼. Port Phillip, 10s to 12s. 6d.; Exchequer, 4s. to 6s.; London and California, 10s. to 15s.; Sierra Buttes, 1¾ to 2; Don Pedro, 9s. to 11s.; Marke Valley, ⅝ to ⅞.

TUESDAY.—The continued firmness of the tin market caused a rather important rise in Dolcoath and Carn Brea; the former left off 4l. better (30 to 31), and Carn Brea 5l. (28 to 30). Such mining shares as Wheal Agar, South Condurrow, Wheal Grenville, and West Godolphin may probably now be in better demand. The buying of West Chiverton goes on; shares were quoted to-day 14 to 15. Tankerville dull, and offered at 5¼. Chicago a nominal market, and not better than 1¼ to 1¾. Port Phillip, 10s. to 12s. 6d. Leadhills, 5 to 5¼. Parys Mountain, 8s. to 10s. Great Western, at all times a peculiar market, being wanted to-day quickly rose 1⅜, and closed at 100½. British left off at 89½, and Metropolitan at 115. Notice was given that the coupon on Egyptian Preference 5 per cent. stock would be duly met on the 15th inst. The price did not leave off better than 59, while the Unified was neglected at 33½.

WEDNESDAY.—The withdrawal of half-a-million of gold early in the day made many weak operators fearful of a change to-morrow in the Bank rate—close their accounts in railways. Berwick declined over 1 per cent., while Brighton, A, Caledonian, and Dover, A, all left off ¾ per cent. lower. But Egyptian stocks were firmer. The Unified, which of late has been heard a great deal, rose 1¼, to 34¾; the Khedive closed 2⅛ better (43 to 44); Credit Company, 1 to 1¼; General Credit, 6⅛ to 6¾; Imprial Credit, 7½ to 7¾; Milner's Safe, 8¼ to 8½; Hudson Bay, 11¼ to 11⅛; Brighton Aquarium, 11½ to 12; Royal Aquarium, 3⅛ to 8⅜; Illinois Central had a rise of 2, to 74.

THURSDAY.—The Bank of England directors raised the rate to 4 per cent. The advance was greater than was generally expected, but the usual Bank return showed in the afternoon sufficient weakness to justify the change. The alteration did not prevent a rise in North British and Great Western. Illinois Central went up a further $1¼. Tram shares were thus quoted—Belfast, 10¼ to 10¾; Dublin, 17⅝ to 17⅞; Edinburgh, 15¼ to 15½; Glasgow, 11½ to 11¾; Hull, 13¼ to 13½; Leeds, 9 to 9¼; Sheffield, 10 to 10¼; Swansea, 9¾. In mines Ashton was dealt in at 1¼, Almada at ⅜, Cape Copper at 34 (ex div.), Flagstaff at 2¼, and Frontino at 3¼.

FRIDAY (*Opening*).—The bidding for tin mining shares continues, and several that a fortnight ago had no marketable value are now being industriously sought after. Wheal Grenville, 2¼ to 2¾; Wheal Agar, 3¾ to 4¼; Wheal Kitty, 1½ to 2; Wheal Uny, 1 to 1½; Cook's Kitchen, 1 to 1½; South Condurrow, 7½ to 8; South Frances, 1½ to 2; Tincroft, 12 to 14. Lead mining shares are still neglected. Rookhope, 18s. to 20s.; North Laxey, 12s. 6d. to 15s.; Tankerville, 5½ to 5¾; South Roman Gravels, ⅜ to ⅝; Leadhills, 5 to 5½. In railways the tone is irregular, British and Caledonian being up, Great Western and Sheffield down.——*Two o'Clock*.—Although the Paris market is reported to be flat prices have not been affected much here, except in the case of Russian, 1873, now down to 76¾. At yesterday's Sierra Buttes meeting a dividend of 2s. per share was declared. The Plumas Eureka having a very prosperous balance-sheet 3s. per share was divided among the shareholders.——*Four o'Clock*.—The stock markets are closing fairly firm. Egyptian Preference are 59, and the Unified 34. The exception are Peruvians, which have been offered since the morning. In mining shares Almada have been dealt in at ⅜, and the London and California at ⅝; Port Phillip, 9s. to 11s.; Parys Mountain, 9s. to 11s.; Prince of Wales, 4s. to 6s.

Birchin lane, Oct. 5. FERDINAND R. KIRK.

A GOOD "STURT."—It is stated that a miner of Redruth, named Carvolth, took a pitch on tribute in Wheal Uny at 15s. in 1l. and having cut a good bunch of tin, will, after paying all cost, take 97l. His only comrade was a little boy, and together they have managed to sample 5 tons of tin.

QUARRIES OFFERED FOR SALE.—The De Lank Granite Quarries were submitted to auction at the Royal Hotel, Bodmin, by Mr. W. Philp, pursuant to an order from the Vice-Chancellor. The quarries are in the parishes of St. Breward and Blisland, and distant from Bodmin about 6 miles. They have been worked for a number of years. Great interest in the sale was manifested by the people of the locality, and there was a large attendance. The competition, however, was very limited, confined to two bidders, one of whom was Mr. Sandoe, of the Royal Hotel, and a gentleman from London: 2000l. was bid by Mr. Sandoe, but no further advance being obtainable, the quarries remain unsold, in consequence of a reserve price made by the Vice-Chancellor. Ten 10l shares in the Bodmin Waterworks, by the direction of the trustee of Charles Goodyear's estate, were sold at (including a call of 10s. per share) 2l. 2s. 6d. per share, to Mr. L. C. Foster.

WHEAL PEEVOR.—They are now raising 30 tons of tin per month, which will give them, at present prices, between 2000l. and 3000l. per month profit! The fact is, they are opening up a really good mine, and their shares will soon, it is thought, be commanding something like their real value. Present price 4l. 10s. to 5l.

BORING MACHINE.—From all the information we receive from our mining correspondents, the boring-machines are going to accomplish a revolution in Cornish mines. The Barrow borer at Dolcoath, we are told, is quite a success; and our correspondents now state that the Beaumont drill at Carn Brea is even more than

a success, as they are now driving 15 times as fast as could be done by hand labour. What will the lords do with regard to encouraging mine adventurers to purchase these expensive pieces of machinery? At Carn Brea meeting the adventurers were told that it will cost probably about 4000*l.* to buy and fix machinery of their own, and as the land of the mineral lords will be developed much faster than by hand labour, and their revenues thereby proportionately increased, they can well afford to meet the adventurers liberally.—*West Briton.*

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains:—Original Correspondence: The Coal Fields of Scotland—No. I.; the Sutro Tunnel; the Products of Coal; the Telephone for Railway Signalling (C. B. Clough); Cape Copper Mining Company; the Flagstaff Mining Company; Cardiganshire Mines (A. Francis); Progress of Mining in the Esgair Hir District, Cardiganshire; Monydd Gorddu Mine (J. G. Green); South Condurrow Mine (W. Rich); Wheal Grenville (W. H. Rule, W. Leach); the Present of Cornish Mining as a Profitable Source of Investment (C. Bawden); Patent Matters—Meetings of Parys Mountain, Sierra Buttes, London and Californian, Newport Abercarn, Derwent Lead, Rookhope, South Caradon Companies, &c.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 5, 1877.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 14 1½	—
„ Scotch, all No. 1 ...	2 15 6	3 10 0
Bars, Welsh, f.o.b. Wales	5 5 0	5 10 0
„ „ in London.	5 15 0	5 17 6
„ Stafford., „ .	7 0 0	8 0 0
„ in Tyne or Tees ...	5 10 0	5 15 0
„ Swedish, London ..	9 2 6	9 12 6
Rails, Welsh, at works..	5 0 0	5 2 6
Railway chairs	—	—
„ spikes	—	—
Sheets, Staff., in London	8 15 0	9 0 0
Plates, ship., in London	7 0 0	7 5 0
Hoops, Staff.	7 10 0	8 0 0
Nail rods, Staff. in Lon.	7 0 0	—
STEEL.		
English, spring	16 0 0	20 0 0
„ cast	35 0 0	45 0 0
Swedish, keg............	16 0 0	—
„ fag. ham.	17 0 0	—
LEAD.		
English, pig, common ..	20 0 0	20 2 6
„ „ L.B. nom.	20 5 0	20 7 6
„ „ W.B.	21 0 0	—
„ sheet and bar..	21 0 0	21 5 0
„ pipe............	21 10 0	—
„ red	22 5 0	22 10 0
„ white	27 5 0	28 0 0
„ patent shot ...	24 10 0	—
Spanish............	19 15 0	19 17 6
QUICKSILVER.		
Flasks of 75 lbs., ware.	7 5 0	—
SPELTER.		
Silesian or Rhenish ..	19 2 6	19 7 6
English, Swansea	21 0 0	—
Sheet zinc	22 10 0	24 0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	71 0 0	72 0 0
„ bars „ ...	72 0 0	73 0 0
„ refined.........	73 0 0	74 0 0
Australian	65 10 0	—
Banca	68 0 0	70 0 0
Straits	66 0 0	—
COPPER.		
Tough cake and ingot.	70 0 0	73 0 0
Best selected	72 0 0	74 0 0
Sheets and sheathing.	77 0 0	78 0 0
Flat Bottoms	80 0 0	—
Wallaroo	79 15 0	80 10 0
Burra, or P.C.C.	74 0 0	74 10 0
Other brands	72 10 0	74 0 0
Chili bars, g.o.b.........	66 0 0	—
PHOSPHOR BRONZE.		
Bearing metal	£112 0 0	
Other alloys	£120 0 0	140 0 0
BRASS.		
Wire	8d.	—
Tubes............	10	—
Sheets	9	—
Yel. met. sheath. & sheets.	6½	7½
Nails composition..........	8¾	9¾
TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 2 0	1 3 0
„ 2nd quality ...	1 1 0	1 1 6
Coke, 1st quality	0 18 6	—
„ 2nd quality	0 17 6	—
Black .... per ton	16 0 0	16 10 0
Canada, Staff. or Gla., at Liverpool	12 0 0	13 0 0
Black Taggers, 450 of 14 × 10	30 0 0	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The demand for shipment and consumption continues extremely limited, and there will probably be little happening to afford any material support to our markets for a long time to come. By the end of this month the shipping season to the Northern ports will be drawing near its close, and after then we shall be fast approaching the dullest and least promising part of the year. With nothing to record of a favourable character, or to give a more hopeful turn to the future, it will be fortunate if prices do not suffer any further depreciation, especially as there are several important matters pending in the political world which at any moment might produce a serious convulsion. The restrictions of the trade are not confined to any branch of business in particular, but apply pretty generally to most employments throughout the country; and, therefore, whenever a resuscitation takes place it will probably not be confined to any one commodity, but extend more or less to all, as the same cause that exercises general depression ought also when removed to bring general relief; but if by any chance one thing only conspicuously rises, then it must either proceed from some special feature relating thereto, or from speculative or other similar distracting element; but from whatever source it might spring it must be equal to the strictest scrutiny, otherwise it would prove abortive and an utter failure. Supposing, however, an advance to be effected in any metal what are the prospects of its maintenance at a period of prostration like the present? We should think they would be very small indeed if left to depend upon legitimate influence, because to render an advance secure it requires substantial support, but in the absence of a *bona fide* demand there would be little to uphold it beyond speculation, an element at the best of times as uncertain as the wind, and upon which no reliance can ever be placed. A speculator is perfectly indifferent as to whether he makes his money on a "bear" or "bull" account, and as soon as he thinks the excitement of the movement will abate, and before allowing time for reflection, he turns round and begins to operate in the opposite direction to that which he has been previously acting.

Buyers, therefore, should never act under the impulse of he moment, and always avoid being carried away by superficial appearances. Money is easily lost, but very difficult to make in these hard times, and extra caution is necessary to ensure safety and success. We are led to make these remarks on account of a sudden and unexpected outburst of speculative feeling in the tin market. Not that we are opposed to speculation if conducted within moderate limits and kept under judicious management, for we think it an excellent auxiliary when properly directed, and fluctuations of 1*l.* or 2*l.* per ton in value cannot at any time be attended with very mischievous consequences. It is only when speculation is carried to excess that an injurious effect is produced upon legitimate trade, but holders must not imagine that speculation by itself can do more than temporarily reanimate the market, and perhaps slightly enhance its fallen position. Neither ought too much importance to be placed upon any trifling change in statistics, particularly when there exists superabundant stocks, ahd other considerations of an equally important character are uppermost. A reduction in stocks arising from accidental causes does not necessarily imply a diminution of supply. Besides there is always first the question of demand to be borne in mind as well as that of supply, and we would rather see speculation just now based upon an improved demand than on any other grounds. The want of demand is what we are suffering from most, and we must candidly confess that we do not see the prospect of it improving during the ensuing quarter.

COPPER.—According to the monthly statement of the stock of copper issued on the 1st instant the total quantity of all descriptions, inclusive of that which is in stock in London, Liverpool, Swansea, and Havre, and afloat and chartered, amounts to 40,523 tons, against 38,952 tons on Sept. 1 last. Although the return is slightly in excess of the previous month, yet upon a stock of about 40,000 tons it matters very little whether there exists a few hundred tons over or under that figure. The market, however, remains remarkably quiet, and some fresh stimulus is needed to excite the demand. There are but very few orders to be obtained, but some little difficulty nevertheless has been experienced even in placing these on account of the Liverpool holders of Chili bars endeavouring to raise prices, but quotations from Liverpool invariably come higher even than London prices are quoted, therefore buyers are more likely to get supplied cheaper here than from there; we think it is a great mistake to attempt to raise prices in a feeble market, especially when the legitimate demand is so much reduced. A higher price at such a time cannot tend to produce business, and we are at a loss to understand the force of such a measure, because the inducement for buyers to operate is taken away if prices are fictitiously upheld. There might have been a chance of drawing out buyers at 64*l.* to 65*l.*, but at 66*l.* there is none, and until prices drop again there will be comparatively little or nothing done.

Holders have selected a most inopportune moment for displaying firmness, as there is not only a considerable falling off in the demand but a great risk incurred in holding stock at the present time, owing to the uncertain course which politics might take in France. With so little advantage to anticipate in the immediate future, and with so much depression and cause for uneasiness still in existence, it is marvellously strange that sellers should be so blind to their own interest as to defer the realisation of the greater portion of their stocks, but a little more pressure and bought experience may, perhaps, show them more distinctly the errors of their ways. English copper keeps very quiet, and orders for manufactured and yellow metal cannot be procured in any quantity at anything like reasonable rates; the result is that prices are easy, but matters are not likely to be improved if Chili bars are withheld from the market. Sellers in that case will not be able to make the necessary concessions to ensure the Indian orders, and consequently the consumption of copper will be more and more limited. Freights to India have greatly advanced, owing to so much Government weight offering, and the difficulty that ships find in procuring homeward freight. This when taken in connection with the reduced prices prevailing in India, and the large supplies already gone forward, leave little to hope for from that quarter of the world. There is no speculation going on here, and so much money has been lost from time to time in trying to lift the market that the effort has at last been abandoned, and until there is something more promising in the market than at present it will be better left alone, otherwise former losses will only be increased. Speculators generally buy at three months prompt, and as they rarely take up the warrants a very little copper suffices to meet such engagements, and the same warrants are kept in circulation for years, and these invariably represent the lowest class of brands yclept g.o.b.'s.

The charters for the last half of September have failed to reach us, owing to a breakage in the cable; but as the news telegraphed out to Valparaiso from this side during that time conveyed the strong downward tendency of our markets and the positive fall in quotations, there is no doubt that the absent telegram shows a further fall in Valparaiso (the last price was 66*l.* 15s. laid down in Liverpool), and we may fairly reckon upon receiving such intelligence before many days. The telegrams from Bombay this week quote copper down ½ rupee; and from Calcutta tile is Rs.31·8; braziers' Rs.33·8; yellow metal, Rs.27·4. By the mail from New York on the 22nd ult. it is stated that the recent considerable sales of Lake have supplied present wants, and that the market was quiet but firm. The advance yesterday of 1 per cent.—to 4 per cent.—in the Bank rate, and the prospect of a higher rate shortly, is not calculated to improve the chances of holders.

IRON.—The prices of Scotch pigs have been slightly lower, and notwithstanding the large "bear" account that is said to be open they will in all probability continue to decline. The stock in store increased last month to 161,001 tons, being an addition of 3369 tons, with warrants in circulation for 142,000 tons. Sellers have done very well in maintaining prices so long, but in the face of increasing stocks, and the prospect of diminished shipments shortly, they will, probably, have to give way in price, and the statistics by the end of the year will, doubtless, be more unfavourable than at the present time. It is evident that the consumption is not keeping pace with the supply, for the increase in stocks is not limited to Scotland, but the stock in Connal and Co.'s yard, in Middlesborough, is 29,430 tons, showing an increase of 6480 tons, with warrants in circulation for 28,800 tons; and as the prices there are something like 10s. per ton below those of Scotch, there seems to be a very poor chance for Scotch to improve, and if it had not been for speculative operations the price would not be so good now. The large "bear" accounts that are open are an evidence of the opinion entertained by a large portion of the trade that prices must go lower, and makers cannot do better than book as many orders as possible for forward delivery; m.n. are quoted 53s. 7½d. cash.

SHIPMENTS.

Week ending Sept 30, 1876	Tons	12,911
Week ending Sept. 29, 1877		9,176
Decrease		3,735
Total increase for 1877		1,263
Imports of Middlesborough pig-iron into Grangemouth:—		
Week ending Sept. 29, 1877	Tons	9,303
Week ending Sept. 30, 1876		4,455
Increase		4,848
Total increase for 1877............		53,300

FURNACES.

In blast Sept. 30, 1876............	118
In blast Sept. 29, 1877............	87

Some of the French markets appear to be in a fairly prosperous condition, for, according to recent accounts, it is stated that in the Champagne district the current of orders is sufficiently well sustained to produce a good relative activity. Merchants' iron, as well as special iron and sheets, is in good demand; on the other hand, machine iron is neglected, in consequence of a check in the exportation. The advices from the Loire and the Rhone districts are less satisfactory, as buyers prefer awaiting the result of the approaching elections before entering into any fresh contracts. The Belgian trade is in a doubtful state, and business is very limited and prices easy, owing to the desire on the part of makers to maintain activity at their mills.

From New York the market for American pig is said to betray a rather firmer feeling, but no decided advance in prices can be quoted. Sales of 400 tons No. 1, 1200 of No. 2, and 2000 tons of forge on private terms. Scotch pigs are quiet, but steady; sales of 100 tons Glengarnock and 100 tons Coltness, on private terms. Rails dull and unchanged. Steel is quoted $45 to $47, and iron $33 to $38; old, $19. Scrap quiet, at $22 to $23 for No. 1 wrought in yard; manufactured dull.

The Middlesborough report states that forge iron does not go off so readily, and prices are lower; ironfounders find difficulty in getting work; and the finished iron trade is dull. Plates are to be bought at 6*l.* 10s., and angles 7s. 6d. to 10s. less.

At Wolverhampton ironmasters of first-quality sheets have dropped their prices, and they can now be bought at 11*l.* per ton. From Lincolnshire the accounts are still unfavourable, and report buyers holding back for further reductions. In the Sheffield, Rotherham, and Leeds districts there is little or no change to note; dulness prevails throughout.

TIN.—The deliveries for September from London amount to 996 tons, and from Holland 478 tons, and the stock in London and afloat of Straits and Australian is 11,574 tons, together with that of Banca, &c., in Holland, 16,694 tons. The figures, compared with last month, show a slight diminution in the stock here and that which is on the way to London, and holders have, consequently, succeeded in obtaining better prices, but our market does not close at the best, for the advance in the Bank rate yesterday considerably cooled the ardour of speculators, and instead of being all buyers, as in the beginning of the week, several sellers came out, and Australian, which has been quoted 66*l.* 10s. to 66*l.* 15s., declined to 65*l.* 10s. The excitement having now subsided, there is a better opportunity afforded for shareholders to decide upon what course next to pursue. If the movement has been based upon unquestionably sound and solid grounds, surely 1 per cent. rise in the Bank rate will not prove a serious impediment to the maintenance of the rise; but, on the other hand, if it has only a weak foundation, a little matter would naturally soon upset the market, and especially if any sales have been made during the recent excitement to weak buyers. The depressed state of trade, howevev, the critical condition of France, and the general want of confidence in the stability of prices would, undoubtedly, deter sellers from effecting contracts with bad or doubtful buyers without ample cover. The task which the operators of the present moment have undertaken is by no means a light and easy one, and it is hoped that they have not entered upon the experiment without sufficient power to uphold it, as they must be prepared to meet a strong and determined opposition. The general feeling is against a rise, principally because it is opposed to general interests; but the stock of 10,000 tons is acting like a tremendous incubus on the market, and unless undoubted evidence can be produced that it will be permanently lightened a rise in value can only be temporarily upheld. There are many holders who now regret that they did not avail themselves of the highest point of of the market and sell out a large quantity then; but the opportunity has been allowed to escape them, and if the chance again occurs they had better secure it without delay.

LEAD quiet, but steady.

QUICKSILVER.—There has been no feature in this article during the past week, business to a fair extent having been daily transacted at 7*l.* 5s., but the speculative disposition to purchase at 7*l.* has apparently diminished in its intensity, probably because of the large London stock, and the continued heavy Californian production, which latter is advised as 7480 flasks for the month of August, or at the rate of nearly 90,000 flasks per annum. The shipments from San Francisco for the week ending the 13th ult. were 3368 flasks, against receipts 1738 flasks, thus absorbing part of the recent accumulation. The market is reported as unsettled, with but small parcels offering, but closed dull at 49 c.

THE IRON TRADE—(Griffiths's Weekly Report).—Friday Evening: The Glasgow market for Scotch pig iron has been dull during the week. Yesterday the advance in the Bank rate had a depressing influence on prices, which drooped to 53s 8d., closing with sellers at that price. To-day, Friday, the market opened flat, but closes firm this afternoon with buyers at 53s 9d., 4d. less than last Friday, when warrants closed 54s. 1½d. We quote makers' No. 1 iron—Gartsherrie, 62s.; Coltness, 66s. 6d.; Calder, 61s.; Langloan, 63s. 6d.; Summerlee, 59s. 6d; Monkland, 55s. 6d., f.o.b. Glasgow; Glengarnock, 60s.; Eglinton, 55s. 6d., f.o.b. Ardrossan; Shotts, 62s. 6d., f.o.b. Leith; Kenniel, 56s., f.o.b. Bo'ness. Our immediate proximity to the quarterly meetings causes a slight pause in the business of the iron trade. The week which precedes the quarterly gatherings of the iron trade is one singularly devoid of new business; this has often been remarked.

At Barrow on Monday the market was firm for hematite pigs, and the healthy demand for this iron for use in the Bessemer process and other purposes keeps in blast nearly the whole of the plant in the district. At Middlesborough on Tuesday the market was well attended, but quiet. Prices unaltered for pig iron. Manufactured iron shows no change. At Wolverhampton on Wednesday and Birmingham on Thursday the trade was quiet; all business of magnitude is reserved for the Birmingham Quarter-day, which takes place on Thursday next in the Exchange there. In accordance with notices issued by Messrs. Stainer and Co., of North Staffordshire, to their colliers and blast-furnace men, the firm have reduced wages by 10 per cent. The men wisely accepted the advice of their delegates, and submitted to the reduction without any strike. Several ironmasters at Wolverhampton are suffering severe injuries to their works from the injurious acids turned into the canal by some manufacturers there. Steps are being taken by the Canal Company to discover the perpetrators of the damage. A meeting of coalowners and delegates was held on Wednesday at Wolverhampton to make the preliminary arrangements for the settlement of a sliding scale to regulate wages and avoid strikes.

Messrs. VIVIAN, YOUNGER and BOND—COPPER: The market was dull and declining up to the end of the month, when a fair business was done down to 65*l.* 10s. for bars cash and three months prompt. During the last few days holders have been asking an advance of 10s. to 20s. on this figure; doubtless this is in a great measure owing to the absence of cable messages, for naturally importers would not like to make sales at current rates unless they knew they were covered on the other side by further purchases. Meanwhile the low prices realised at the Swansea ticketing have contributed a good deal towards this depression, but month by month a larger surplus of furnace material from abroad becomes available for the smelters, and in fact so far this year this increase amounts to about 8000 tons fine copper, whilst, owing partly to the continual increase amongst their old customers of the practice of refining their own bars, and also the undoubted large falling off in the general demand for brass and copper work, the smelters are ill provided with work to get rid of this surplus. We incline to the opinion that these rates will cause a decrease of production, and an increase of consumption, but of course it will be some time before the results are apparent.——TIN: The fluctuations during nearly the whole of the past month were unimportant, but the market hardened after the Dutch sale, which took place at Rotterdam on the 26th ult., as follows:—21,635 slabs Banca at 40 fls. 30 c., equal to 68*l.* 10s., delivered here, and 3392 slabs Billiton at 31 fls. 75 c., equal to 65*l.* 10s. per ton. The chief business was in Australian, at from 64s. 6d. to 66s. 6d. for spot parcels, up to 67s. 6d. being paid for forward delivery. Straits was dealt in at 65s. to 67s. 6d., but comparatively neglected. The Cornish standards were advanced 2*l.*, and common ingot quoted at 72s.

Messrs. JAMES and SHAKSPEARE—Stocks, September 29:—

Copper............	England and France............	Tons 32,103
Tin	England and Holland............	12,735
Spelter............	London, 203; outports, 707 = ...	910

At Redruth Ticketing, on Thursday, 1292 tons of copper ore were sold, realising 5369*l.* 9s. 6d. The particulars of the sale were—Average standard, 86*l.* 5s.; average produce, 8; average price per ton, 4*l.* 3s.; quantity of fine copper, 103 tons 9 cwts. The followi[ng are] the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore c
Sept. 6.	2027	£ 86 18 0	7⅞	£4 2 0	10s. 5d.	£51
„ 20.	2980	88 0 0	6⅝	3 1 0	9 3	46
Oct. 4.	1292	86 5 0	8	4 3 0	10 4½	51

Compared with the last sale, the advance has been in the sta[ndard] 4*l.* 5s., and in the price per ton of ore about 6s. 9d.

The MINING SHARE MARKET has been rather excited this [week] by another rise in tin, making the third advance in the stan[dard] for ores in Cornwall in three weeks. This has naturally imp[roved] the share markets generally, and if copper and lead should ad[vance] which is not at all unlikely, a general rise in prices must [take] place. Many mines have been for months past greatly depr[essed] and below their real value, and the few inquiries now quietly [made] for them show that it is almost impossible to get shares at q[uota]tions when any demand arises. The mines mostly in favour [have] been Dolcoath, Carn Brea, West Chiverton, Rookhope, [Parys] Mountain, Wheal Grenville, New Chiverton, East Pool, Tin[croft,] Great Laxey, and a few others.

At the Copper Ticketing on Thursday the standard for c[opper] ores advanced 4*l.* 5s. per ton. The average price of the ore, [per] cent. produce, was 4*l.* 3s. per ton. Money realised, 5369*l.* 9s. [6d.]

TIN MINES have received the greatest amount of attentio[n this] week, and quotations are higher, but we do not hear of many [large] transactions. There have been plenty of buying orders, bu[t the] difficulty is—and this is what we anticipated—in finding s[ellers.] Dolcoaths have advanced from 25 to 30, 32½, leaving off 29 [to] ... Carn Brea from 21 to 29, 31; Tincroft, 10 to 12, 14. Cook's Ki[tchen] have risen from 4s. to 20s., 25s.; East Pool, 8 to 9. South Fr[ances] have risen from 13s. 6d. to 30s., 35s.; West Frances, to 2½ ... This mine, it is hoped, with a better price for tin, may m[ake a] profit. Wheal Grenville are better, at 2¼ to 2¾; South Cond[urrow] not so firm, at 7½ to 8; Wheal Peevor, 4 to 4½; Wheal Basset ... advanced to 10 to 12; West Godolphin, 1½ to 2; the new eng[ine is] expected to be completed and put to work during the p[resent] week; Wheal Agar, 3½ to 4; Wheal Jane, ¾ to 1; Wheal Kitt[y] ... Agnes, 1½ to 2; Wheal Uny, 1 to 1¼.

COPPER MINES.—The greatest feature here is the rise in [Parys] Mountain shares, equal to about cent. per cent. from the l[owest] prices reached. There has been a good demand for them, an[d] prices leave off 9s. 6d. to 10s. 6d. Particulars of the meeting [will] be found in another column. The shareholders who attended, [who] represented 5000 shares, were unanimous against the winding [up of] the company, and resolved to limit the issue of Morfa-Du to ... shares, as suggested in last week's Journal. This is regard[ed as] giving a valuable "option" to present subscribers, and to [those] who apply up to a certain date. West Tolgus, 74 to 76; the ... Thursday (340 tons) realised 2068*l.* Devon Great Consols, 3¼ ... Wheal Crebor, 1½ to 2; the sampling here is 285 tons of copp[er] for the quarter. East Caradon, ½ to ¾; Marke Valley, ¾ to 1; ... of Wales, 4s. to 6s.; South Caradon, 90 to 100; Tolgus Uni[ted] ... to 5½. West Seton, 20 to 25; the sales of copper ore on Th[ursday] realised 390*l.* At the Gawton Copper meeting the accounts sh[owed] 400*l.* against the mine, and a call of 2s. per share was made. [The] mine is reported as looking well.

Among LEAD MINES Rookhope have been in good request a[t] 1⅛; the accounts presented to the meeting on Thursday, ful[l par]ticulars of which will be found in another column, show lead ... 410 tons, 4949*l.* 15s.; balance of assets over liabilities, 2220*l.* ... The directors' report states the returns for the last three m[onths] 40 tons per month, have exceeded the working costs by 180*l.* [not]withstanding the fall in lead; the sampling this month is 50 ... Derwent, 2 to 3; full particulars of this meeting will be fo[und in] another column. The accounts show sales of lead ore to ... June, 206 tons, 5416*l.* 15s. 6d.; expenditure on capital acc[ount] 1933*l.* 16s. 8d.; monthly expenditure, 6350*l.* 2s. 3d.; balance c[arried] forward, 15,379*l.* 2s. 9d. In the three months since June th[e] sales have realised 1724*l.* The agents hope that as the levels g[et ex]tended, and more men are employed in stoping, that the min[e will] do well, and prove itself to be a lasting and permanent co[ncern.] Glenroy, ⅞ to 1⅛; the accounts to be presented to the meeting ... a balance of assets over liabilities of 9208*l.* 16s. 5d. The or[e sales] have amounted to 659*l.* 1s. 5d. The lode in the shaft continues ... wide, and here at present the mine would seem to present th[e] prospects of success.

Great Laxey made all its riches in depth, and if in sinki[ng the] shaft here a course of ore should be met with it would cause e[xcite]ment. North Laxey, 13s. 6d. to 15s. 6d.; there is an improv[ement] 8 fms. below the 121; lode 6 ft. wide, and worth fully 30 c[wts. of] lead per fathom. Great Laxey, 20½ to 21½; Roman Gravels ... at 8¼ to 8¾; Tankerville, 5¼ to 5½; South Roman Gravels, ... 12s. 6d. West Tankerville, ¾ to 1; the sale of ore here, 35 ... realised 428*l.* 15s., and 20 tons of blende have been sa[mpled.] Temple, 1¾ to 2¼; there is said to be a course of ore in th[e] ... worth 1 ton of lead per fathom. Van enquired for at 30 ... Van Consols, ⅜ to ⅝; East Van, 4 to 4½; West Chiverton, 14 ... West Craven Moor, 9½ to 10½; Aberdaunant, ⅛ to ⅜; Assheton, 1 ...

East Craven Moor, 9½ to 10½; Glyn, ⅜ to ⅝; Herodsfoot, 6 ... Llanrwst, 2 to 2½; Ladywell, 1 to 1¼; Leadhills, 5 to 5½; P[ateley] Bridge, 1¾ to 2¼; West Pateley, 1¾ to 2. Pandora, ½ to 1; a[n] improvement has taken place here. West Assheton, ¾ to 1. ... sedd, 5½ to 6½, ex div.; another parcel of 50 tons of lead will b[e sold] on Thursday next. The mine is reported to be looking better ... ever. Pennant, 5½ to 6; Great Holway, 5 to 6; Caron, 2¼ ... Grogwinion, 2½ to 3½; Red Rock, 2 to 2½; South Cwmyst[wyth,] 2½ to 3½; St. Harmon, 2½ to 3½; Wye Valley, 2 to 3; West ... Valley, 2 to 3; West Goginan, ⅛ to ⅜.

FOREIGN MINES.—Argentine, 2¾ to 3¼; Blue Tent, 3 t[o] ... Condes of Chili, 2¾ to 3¼; Cape Copper, 33 to 35; Chontales, ... Eberhardt and Aurora, 5 to 5½; Exchequer, 4s. to 6s.; Fla[gstaff,] 2¼ to 2½; Frontino and Bolivia, 3 to 3¼; Javali, 6s. to 8s.; Ch[ile,] 1 to 1½; Last Chance, ⅞ to 1⅛; Malpaso, ¼ to ½; New Quebra[da,] ... to 3; Port Phillip, ½ to ⅝, ex div.; Richmond, 4¾ to 5¼; St. ... del Rey, 310 to 320; Tecoma, ¼ to ½.

The Market for Mine Shares on the Stock Exchange ha[s] generally improved during the week, and there is altoget[her a] better feeling as to the future. The rise in the price of lead n[oticed] last week has been followed by a decided improvement in tin, ... on Thursday the standard for copper ore sold at Redruth imp[roved] 4*l.* 5s., making a difference in favour of the miner of nearly ... each ton of ore sold. The effect of these movements has nat[urally] been to create the opinion that the worst has now really been p[assed,] and that we are once more progressing towards that comm[ercial] prosperity which is so desirable for the welfare of mining ind[ustry.] In Carn Brea, Tincroft, Dolcoath, and West Chierton imp[ortant] rises have been established, and the shares in many other min[es are] certainly more readily saleable than they have been for a con[sider]able time past. In foreign mine shares no corresponding imp[rove]ment is discernible, and Cape Copper has also largely declined. ... the improvement may have some influence in bringing forward ... enterprises for working or reworking home mines, it may b[e well] to consider whether some better system of constitution can[not be] adopted which will secure proper working of mines, prevent vic[timis]ing of creditors, and also to afford full protection to capit[alists.] The recent exposures in connection with concerns managed o[n the] Cost-book System have proved that not only does that sy[stem] afford no protection to capitalists, but actually places them [in a] worse position than partners in the most ill-constituted pr[ivate] concerns, the holder of a single Cost-book share being liable t[o be] utterly ruined through the paternal government exercised b[y an] injudicious or perhaps interested purser; whilst the Li[mited] Liability principle has been declared equally objectionable, ... the facilities which it offers the scandalous practice of "syndica[ting"] which has now become almost general; indeed, it is diffic[ult to] point to a company which has been formed or reconstituted d[uring] the past few years which has been otherwise floated. In the ... the independent capitalist inevitably loses the greater part, if n[ot the] whole of his investment, whilst the larger proportion of the m[oney] subscribed goes into the pockets of the promoters, who vir...

...the vendors, instead of being applied for developing the mine. Both these evils can readily be avoided by the adoption of the combination of the Cost-book and Limited Liability principles sanctioned by the sections of the Companies Acts authorising the establishment of companies "limited by guarantee," and suggested several years since in the *Mining Journal* by Mr. Anthony Pulbrook, solicitor, who had much experience in connection with the working of the Acts in question, and whose annotated edition of them is decidedly the best published. For the working of mines what might be popularly described as the "Cost-book Company limited by guarantee" would leave nothing to be desired, and would be applicable in every part of the kingdom. The nefarious practices of syndicates would be rendered impossible, and as every possible protection could be afforded to capitalists that their subscriptions would really be applied to the working of the mines, the difficulty of raising the necessary capital would be much diminished, and both capitalists and promoters would be permanently benefited.

Cape Copper, 33 to 35; with reference to the observations in last week's Journal as to the undesirability of paying the last dividend, "An Original Shareholder" writes that, taking the company's returns, the general liabilities have diminished from 139,693*l.* in 1872 to 102,278*l.* in 1877; the debenture debt of 21,000*l.* existing in 1872 having been also paid off. The company has, moreover, during the same period expended 167,866*l.* in constructing the railway, and paid over 140,000*l.* in dividends. The mine reserves increased from 18,584 tons in 1872 to 38,000 tons in 1877, and the annual returns have increased 50 per cent., reaching 12,000 tons in 1877. He adds that, taking the fact as stated in the Journal, including the sales of ore made prior to the payment of the last dividend a profit of 21,000*l.* was earned (20,000*l.* being sufficient for the usual dividend), the directors would have falsified all their previous proofs of steady carefulness had they broken the regularity of the dividends because of a fall in the price of copper ore that may be, and probably is, only temporary, especially as it is perfectly well known that even at present prices the Cape Copper Mining Company is making large profits, owing to the great reduction in expenditure which the directors have effected.

Linares, 6 to 6½ (ex div.); the profit for the six months to the end of June was 5269*l.* 16s. 2d., which considering the reduced price obtained for the lead sold is regarded as satisfactory. Further economies have been effected in the management. A dividend of 6s. 8d. per share is payable on Oct. 13, and after paying this and adding 500*l.* to the reserve fund (raising it to 3903*l.* 19s. 5d.) there will be ...*l.* 6s. 11d. to carry forward. Alamillos, 1¼ to 1¾ (ex div.); the gross profit exceeds that of the previous half-year. The reserve fund has been debited with 2319*l.* 6s. 5d. expended on the new smelting works at Cordova; three furnaces are already at work. A dividend of 1s. per share is payable on Oct. 13, and after payment thereof there remains 256*l.* 13s. 7d. to carry forward. Fortuna, 5 to ... (ex div.); the profit on the six months was 8387*l.* 13s. 7d., or about ...*l.* less than the previous half-year. The prospects for the ensuing half-year, both at Canada Incosa and Los Salidos, are encouraging, new ore ground having been discovered since last meeting. The smelting establishment has been extended, and the railway from the mines to Pozo Ancho now gives the company the advantage of rail carriage direct from the mines. After payment of a dividend of 6s. 8d. per share on Oct. 13, and adding 500*l.* to the reserve fund (then amounting to 7833*l.* 8s. 11d.), there remains 631*l.* 12s. 9d. to carry forward. The meetings of these three companies will be held on Thursday next.

St. John del Rey, 310 to 320; the latest telegram from Morro Velho, dated Bahia, Oct. 1, states that the produce for the second division (11 days) of September was 15,250 oits., value 5909*l.* The portion of the telegram giving the ley of the ore is unintelligible. Pestarena, 1½ to 2½; Mr. Oxland's own experiments with ore from the calciner is said to have yielded good results, but the report adds that owing to the extreme hardness of the calcined ore from the bottom of the Pique, and the feeble grinding action of the present arrastres, it does not appear to be possible to treat the ore with sufficient rapidity. Another great obstacle is the difficulty of drying the ore, more especially so in the wet and unsettled weather lately experienced, so as to bring it to a fit state to enter the calciner. The adoption of the grinder pans, &c., recommended by Mr. Oxland, will remove all these difficulties. Bar gold obtained in ... days' run from 350 tons of ore, 216¾ ozs.

Frontino and Bolivia, 3 to 3½; the profit for the month ending ... 20 amounted to 243*l.* 3s. 6d. In addition to the monthly cost (...*l.* 15s. 11d.), there has been expended 447*l.* 10s. 5d. on capital account. It appears that only 24½ tons of mineral were taken from the Silencio Mine, and that this produced 44 ozs. of gold, nearly ... per ton. Mr. White took special note of the stuff sent to the stamps, and he calculated only about 2½ tons of the total ... tons were mineral from the lode, the rest being stuff from the hanging-wall, which is soft, while the footwall and mineral are both hard. The manager adds that he is well satisfied that the mineral from this mine is as rich as they expected. The bankers report that they are in hopes that soon all the mines will give a good yield, and that the company will have a long epoch of prosperity.

Richmond, 4¾ to 5¼; the usual weekly telegram from the mine is ... regarded as very satisfactory. The week's run is given at ...,000, from 750 tons of ore from two furnaces. The refinery produced $35,000. They have struck rich ore in the 200 southerly ..., now continuous between the second and fourth levels. The manager's report states that the new stope in the 400 level is opening out well, showing a fine breast of very good ore; as far as seen ... about 12 ft. wide, and looks promising to make a large body of ore. The 600 west also looks more favourable for ore. Everything was looking well, and the machinery was in first-rate order. Colorado United, 1½ to 2; from some interesting details in another column it will be seen that these mines furnish employment for about 150 men.

Tecoma, ¼ to ½; a circular has been issued to the shareholders giving the result of Mr. Adley's visit. He reports that the work in operation is confined to Barker's incline, and that throughout these workings a pipe of ore is visible along one side of the incline, constantly changing in form and width, from a mere thread to ... ft. and 3 ft. Here and there pockets of good ore have been found and extracted. At the bottom of the incline the pipe of ore showed strong, and the men were directed to follow the ore down. Since then favourable reports have been received, the ore continuing to hold. The ore is a carbonate, intermixed with galena, smelts freely, is highly prized by smelters for its fluxing properties, and ... fetches the highest price for ores of like grade. So far the workings have developed hopefully. The prospects are good, and further judicious opening out is certainly justifiable. The debenture trustees' agent, Mr. Bamberger, reported on Aug. 1 that he was extracting some good ore. On Aug. 20 he found the prospect better than at any time since he commenced work. They struck a small cave containing about 6 tons of very good carbonate ore, and extracted the same. They then ran a drift, where they struck another cave showing ore, and are now prospecting the same. The formation of the country rock at this point is more regular and compact, and daily looking for better developments. On Sept. 1 Mr. Bamberger telegraphed the sale of a sample lot of 10 tons of ore at ... per ton.

Exchequer, ⅛ to ⅜; the manager has succeeded in getting a few men to clear the caved places, so that Mr. Henry Sewell may have access to every part of the mine for a thorough examination, more particularly the last discoveries in the 400 ft. level. That work is not yet completed. Many of the shareholders are looking forward with considerable anxiety for Mr. Sewell's report, which, it is hoped, will have the effect of improving the position of shares in the market. I.X.L., 3-16 to 5-16; the manager thinks they are near a discovery in the shaft. The foreman reports that the wood road is completed, the machinery and boiler repaired. The water, which was up to the 200, and is making fast, is now out, and the bottom reached. There are iedications of tapping a ledge (probably the I.X.L. lode) in the shaft. Everything in and about the mine is looking and working well. It is remarked that it is not surprising that these shares just now attract so little attention, as it is understood there there are few offering; and it seems likely the number will decrease, as by the report from the great influx of water in the shaft it is expected that a discovery will be made there of a lode running parallel to the I.X.L., and may converge into it sooner than was originally anticipated.

In the shares of Lead Mines there has also been a better feeling Van, 30 to 32; the operations at the mine are progressing as favourably as usual. Grogwinion, 2½ to 3½; the sale of 100 tons of lead realised 12*l.* 3s. 6d. per ton, being an advance of 5s. 6d. over previous sale. Wye Valley, 2 to 3; the meeting is called for the 8th inst. West Wye Valley, 2 to 3; no news to report this week. St. Harmon, 2½ to 3½; all going on well at the mine. South Cwmystwith, 2½ to 3½. Caron, 2¼ to 2¾; a meeting is to be held on the mine on the 16th inst. Red Rock, 2 to 2½; satisfactory progress is making at all points.

Subjoined are the closing quotations:—

Assheton, 1 to 1¼; Carn Brea, 30 to 32; Devon Great Consols, 3 to 3½; Dolcoath, 30 to 33; East Caradon, ⅛ to ⅜; East Van, 3½ to 4; Glenroy, ¾ to 1; Glyn, ¼ to ½; Great Laxey, 20 to 22; Hingston Down, ⅛ to ⅜; Leadhills, 5 to 5½; Marke Valley, ⅝ to ⅞; Parys Mountain, ⅜ to ⅝; Pateley Bridge, 2 to 2¼; Pennerley, 1-16ths to 3-16ths; Penstruthal, 3-16ths to 5-16ths; Roman Gravels, 8¼ to 8¾; Tankerville, 5½ to 5¾; Tincroft, 12 to 14; Van, 30 to 32; Van Consols, ¼ to ½; West Assheton, ½ to ¾; West Chiverton, 13 to 15; West Tankerville, ¾ to 1; Wheal Grenville, 2 to 2½; Almada and Tirito, ¼ to ½; Argentine, 1½ to 2½; Birdseye Creek, ½ to ¾; Blue Tent, 3 to 3½; Cape Copper, 33½ to 34½; Cedar Creek, ⅜ to ⅝; Chontales, ¼ to ¾; Colorado Terrible, 1½ to 2; Condes of Chili, 2¾ to 3¼; Don Pedro, ⅜ to ½; Eberhardt and Aurora, 5 to 5¼; Exchequer, ⅛ to ⅜; I.X.L., 3-16ths to 5 16ths; Emma, ⅛ to ⅜; Flagstaff, 2¼ to 2½; Frontino and Bolivia, 2⅞ to 3⅛; Javali, ¼ to ⅜; Kapanga, 1 to 1¼; Last Chance, ⅞ to 1⅛; New Pacific, ⅛ to ⅜; New Quebrada, 2½ to 2¾; Pestarena, ⅛ to ¼; Plumas Eureka, 2⅞ to 3⅛; Port Phillip, 7-6ths to 9 16ths; Richmond Consolidated, 5 to 5¼; St. John del Rey, 310 to 330; San Pedro, ⅛ to ⅜; Sierra Buttes, 1⅝ to 1⅞; South Aurora, ⅛ to ⅜; Tecoma, ⅜ to ⅝; United Mexican, 1½ to 2; Oregan pref., 4 to 4½; West Pateley, 1¾ to 2.

Collieries.—The past week has been somewhat dull as regards business in this class of shares, and few transactions have taken place. Prices, however, have been fairly maintained, and in one or two cases a slight improvement may be recorded. The reports from the coal districts are this week hardly so satisfactory as at the date of our last issue, though in house coal there is a little more activity, and in some cases better prices have been obtainable. Alltami shares have been dealt in at prices running between 4 and 5. The main coal is still opening up well. Llay Halls, 8 to 10; this colliery has again slightly increased its output, and before long will be raising a greatly increased quantity of coal. Mold Argoeds have been offered, and close at 2 to 2½. Chapel House shares remain firm, at about 3 to 3½; the business of the company continues to be most satisfactory, the large rate of profit made being steadily maintained. The new 15 ft. ft. pit is now down 300 yards, and will be completed to the same depth as the 16-ft. pit by about the end of the year, after which the output—and, consequently, the profits—will be greatly increased.

The new company to work the Yniscedwyn Collieries will probably be placed before the public during the coming week. We understand that the greater portion of the shares have already been subscribed for privately. New Sharlston shares are slightly firmer, and close at 3¼ to 3¾; Newport Abercarns close the week at 4 to 4½; Thorps Gawher, 2½ to 3½; Pelsall Coal, 3 to 3½; Androw Knowles, 17 to 18; Cakemore, 2 to 2½; and Cardiff and Swansea, 15s. to 25s.

Mr. Justice Lopes, for the Master of the Rolls, has made an order directing the compulsory winding-up of the Investors' Trust, and Mr. Edward Hart (Hart Brothers, Tibbetts, and Co., Moorgate-street) has been appointed the official liquidator.

A petition for the winding-up of the Sanitary Carbon Company is to be heard on Oct. 11.

North Hendre (Lead).—We are pleased to hear of the increased prosperity of this mine, as it makes the Halkyn district once more prominent. The sight on the bank is truly cheerful, with about 150 tons of bright ore dressed ready for market next week, and another lot on the dressing-floors, &c. There are six or eight ends producing splendid ore. We understand that another dividend of 5 per cent. (the fourth this year) will be declared this month, and the general prospects are really what this enterprising company deserve. The mine is worked in the most honest manner, and every effort made to make it permanently what it now is—one of the first dividend mines in Wales, although scarcely known in the London market.

West Roskear.—This mine will soon be drained to the 24, which will then be driven to get under the promising lode standing in the bottom of the 12. In the latter place the lode is 5 ft. wide, and of a strong and masterly appearance, and the level has been driven many fathoms through the most favourable indications for a fine discovery at the 24. A cross-cut will be driven at the 24 to intersect the caunter lode in the eastern ground, and from which a considerable quantity of silver lead has already been raised and sold, some of the ore having realised 26*l.* per ton, and another parcel will be sampled next week. Copper ore and blende are also in a forward state for sampling, and, altogether, the prospects of the mine are of the most encouraging character. The present company only commenced operations in May last, and the progress made may be considered as highly satisfactory for so brief a period. The mine is one of, if not the best, young speculations in the western part of Cornwall.

South Molton Consols.—A portable steam pumping-engine has been hired for this mine, and operations will be commenced next week; and parties who knew the state of the mine when it was suddenly stopped in 1874 say that the 12 fm. level will be drained in a few days after, and a good lode of lead ore reached. Mr. John Watson, of Gracechurch-street, has been appointed the secretary, and Capt. Hosking, of Wheal Agar, the manager of the mine.

Tecoma.—Prospecting is continued in the Barker incline, and the percentage of lead in the ore is decreasing, while that of silver is improving. One carload of ore recently sold at $35 per ton assayed 39·5 per cent. of lead and 30·33 ozs. of silver. The manager writes hopefully of improved developments.

Pandora.—An important discovery has been made during the past week. The 33 cross-cut east has cut rich stones of lead and blende, believed to be a branch which was met with in the upper levels just before reaching the lode. A most favourable change has also taken place in the 23 north on Goddard's lode, where what appears to be another course of ore has been reached. From all indications a large and profitable run of ore should now speedily be laid open.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

Cornish Mining—"T. W. D." (Glasgow).—The only work at all answering the description is Messrs. Phillips and Darlington's Records of Mining and Metallurgy, and even that has, we believe, been long out of print; it was published by Messrs. E. and F. N. Spon, of Charing Cross, to whom application may be made. They also publish a book by André bearing upon the subject.

Received,—"J. R." (Lander County): A letter has been forwarded, as requested—"Gyllngdale" (Flagstaff and Professor Vincent): The comments are far too personal for publication. The gist of the letter is to ascertain where the Professor obtained his mining experience, and perhaps that information may be forwarded—"J. H. S."—"Senex" (Parys Mountain): We hope all the writer anticipates may be realised—"A Former Shareholder" (Wheal Grenville) should have forwarded his letter to the Secretary, who might in reply have sent the desired information—"Constant Reader" (Sunderland): An article on the deepest mines was published in the Journal of July 15—"Shareholder" (Van Consols)—"W. R." (Goole)—"Miner" (Dolgelly): We should be glad to have the particulars—"Stannum"—"W. T." (Ballydehob).

Important Notice—Reduction of Postage on the "Mining Journal."—In consequence of the new Postal Convention, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one fourth. Henceforth the subscription will be 1*l*. 10*s*. 4*d*. per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta' Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l*. 19*s*. (50 frs.)

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 6, 1877.

THE RATING OF COLLIERIES IN WALES.

In no part of the kingdom has there been a greater diversity of opinion with respect to the mode of rating collieries than in South Wales, whilst the loss in legal expenses to mineowners and boards of guardians of late must have been very heavy. Year after year the assessments are made only to be followed by appeals to Quarter Sessions, in many instances resulting in considerable reductions. This year it is evident is to be no exception to its predecessors, for only last week there was a large gathering of colliery-owners at Pontypridd for the purpose of considering what steps should be taken as to the appeals against the assessments made in that Union. Mr. Hedley, of Sunderland, is the valuer on behalf of the county, and it appears he has made no less than three valuations for the acceptance of the colliery-owners, but no decision was come to with respect to any of them. Now, we certainly do not see why proprietors of mining property should be kept in a constant state of fermentation and put to serious expense in having their mines valued for assessment. All that they require is that they shall be treated in a fair and equitable manner, the same as other ratepayers, but as in most Unions the guardians are principally farmers or ordinary tradesmen, who think that coal is capable of standing almost any strain or burden, and consequently look to being themselves relieved at the cost of the colliery-owners. This state of things will doubtless continue so long as the rating of mines is left to individual caprice or to persons without any clear or defined general plan. That this is the case will be at once evident on a perusal of the returns recently issued on the motion of Mr. Knowles, showing the gross estimated rental and rateable value of coal, ironstone, and other mines. From it we notice that almost every Union adopts a different system in arriving at the gross estimated rental of mining properties, and in the deductions in determining the rateable value. In some instances no difference whatever is made between the gross estimate rental and the rateable value, whilst in others the rate is fixed by taking 25 per cent. off the gross estimated rental, or, as we find in other instances, the gross rental is arrived at by adding from 5 to 25 per cent. to the rateable value. Surely where such marked discrepancies are found the colliery-owners must be fully justified in opposing the rates levied upon them by an irresponsible individual, who knows that he will be energetically supported by the body who employ him, the members of which being interested in having coal mines rated as high as possible. But this state of things cannot go on much longer, and as there has been so much special legislation of late years with respect to the working of mines, greatly increasing the cost of keeping them going, it is necessary that there should be a clear and well defined law with respect to the valuing of mines for rateable purposes, instead of the present fast and loose system. That there is a great difference in the various Unions as to the mode of assessment, and consequently of the amounts paid for rates by different colliery-owners working exactly the same seam of coal, and under the same expense, will be seen from the following returns for the various Unions and counties in North and South Wales as to gross estimated rental and aggregate rateable value:—

	Number of mines.	Gross estimated rental.	Aggregate rateable value.
Brecon—Crickhowell	—	£ 1,760	£ 1,760
Carmarthen—Carmarthen	1	600	400
Llandilfawr	16	3,750	2,339
Llanelly	49	16,365	13,572
Denbigh—Wrexham	32	24,206	21,294
Flint—Hawarden	15	10,434	8,361
Holywell	26	19,464	15,581
Glamorgan—Bridgend, &c.	22	27,550	27,550
Cardiff	6	2,536	2,232
Gower	8	2,408	2,275
Merthyr Tydfil	95	194,310	155,700
Neath	46	27,291	25,905
Pontardawe	37	18,431	17,537
Pontypridd	79	154,573	123,799
Swansea	26	11,093	11,093
Montgomery—Haverfordwest	4	870	652
Pembroke—Narberth	9	3,144	2,478
Total	448	£518,785	£432,728

From these figures it will be seen that in Brecon the rental and aggregate rateable value are the same, whilst in Carmarthen, where there is only one mine, the rateable value is one-third less than the estimated rental. Coming, however, to the important county of Glamorgan, the principal one in South Wales so far as regards the quantity of coal raised, we find great difference with respect to the valuations in the various Unions.

Merthyr Tydfil it will be seen is the heaviest assessed of the colliery unions in the county, the rule or basis upon which the gross estimated rental is arrived at being by adding 25 per cent. to the rateable value. We are not told how the rateable value itself is struck. Things, however, are different in the Neath Union, where the value is ascertained by rating the quantity of coal worked at the various collieries at so much per ton, returns of which were made every half-year, and the gross estimated rental is arrived at by adding 5 per cent. to the rateable value. At Pontardawr, where there are some 37 collieries, a somewhat dissimilar mode prevails. The returns of the workings are sent to the Clerk to the Guardians by the colliery proprietors, when the pits are rated according to the number of tons worked on a basis framed by the Assessment Committee at 7d., 8d., and 9d. per ton, 5 per cent. being allowed in determining the rateable value. Pontypridd Union stands next to Merthyr, the mines having been valued by Mr. Hedley, but it is stated that the Assessment Committee are unable to answer the question as to the scale of the deductions in determining the rateable value, but the gross estimated rental is arrived at by adding 25 per cent. to the rateable value. Proceeding farther on, we find that at Swansea the gross rental is estimated upon the quantity of coal worked during the year, the average being about 6½d. per ton. By this means the aggiegate gross rental and the aggregate rateable value are both the same. Haverfordwest boasts of one colliery, but the rating is entirely different to what it is in Glamorganshire, the rental being fixed according to the royalty for the coal raised, but in the rating 25 per cent. is allowed for repairs, machinery, &c. A similar mode with respect to rental is carried out at Narberth, in Pembrokeshire, but in determining the rateable value allowance is made for waste and consumption by engine, but on no fixed scale, percentage being taken off according to the circumstances of each case. In Carmarthen another change takes place, for in that Union one-third is taken off the royalty in fixing the rate, whilst in Llandelofawr the royalty is 6d. per ton, and there is an average deduction of 15 per cent. from the rateable value. In Llanelly there is another wide difference, for the royalty is assumed at 8d. per ton, from which a deduction in determining the rateable value of 1½d. per ton is made.

In North Wales marked changes again take place, for we find that in the Wrexham Union, in which there are the largest number of collieries of any in the northern part of the Principality, there is no fixed rule on which the gross estimated rental is arrived at. In some parishes it is estimated, or rather assessed, at 11½d., in others at 11d., and in some others at 10d. per ton. In most parishes, however, 12½ per cent. is deducted from the gross to arrive at the rateable, and in the remainder 10 per cent. At Hawarden, in Flintshire, the basis on which the gross estimated rental is arrived at is by taking 8d. per ton on the quantity of coal and slack raised, and allowing a reduction of 20 per cent. in determining the actual rateable value. At Holywell, in the same county, the gross it appears is fixed upon the amount of royalty paid during the preceding year; a free and easy way certainly, but one we should say that cannot be altogether satisfactory. Still, the Union evidently treats the colliery-owners with some consideration, for, from the assumed royalty on a given quantity of coal, 20 per cent. is deducted to arrive at the rateable value, and 10 per cent. upon the buildings.

It will be apparent from what we have shown that the present system, or rather systems, of rating collieries in Wales in particular is fraught with gross and glaring inconsistencies, and in many instances presses most unfairly upon a class that has never shown any disinclination to bear a fair share of all local burdens. The assessment committees may be quite disinterested, but it is an admitted fact that those ratepayers who feel obliged to appeal against their ratings are mostly colliery owners who are by far the largest contributors towards the support of the poor. The only course left open for them to adopt is to apply to the Legislature to lay down one uniform system for the rating of mines, so as to avoid that costly litigation, ill feeling, and unfairness which are engendered by the present complicated modes in force by the various Poor Law Unions throughout the kingdom.

THE COPPER TRADE.

During the quarter ending Sept. 30 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 14,111 tons, which contained 983 tons 2 cwts. fine copper, and realised 53,320*l*. 11*s*., being equal to an average of 3*l*. 15*s*. 7*d*. per ton of ore, and 54*l*. 5*s*. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 17,972 tons, which contained 2220 tons 13 cwts. of fine copper, and realised 133,294*l*. 18*s*., being equal to an average of 7*l*. 8*s*. 5*d*. per ton of ore, and 60*l*. 0*s*. 6*d*. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 7 per cent., whilst that sold at Swansea gave an average produce of 12⅜ per cent. From this it will be seen that the aggregate sales by ticket were 32,083 tons of ore, containing 3203 tons 15 cwts. of fine copper, and realising 186,615*l*. 9*s*. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively. The ores sold at the Cornwall Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
July 5...	£ 99 0 0	7⅞...	£4 16 0...	12s. 7 d.	1713	130t. 14c..	£ 8,231 15 6
18 ...	99 7 0	6¾...	3 19 6...	11 11	3447	232 19...	13,665 0 6
Aug. 2...	90 14 0	8 ...	4 9 6...	11 2½	1274	101 12...	5,709 6 6
23...	96 16 0	6 ...	3 3 6...	10 5	2670	161 19...	8,337 6 6
Sept. 6...	86 18 0	7⅞...	4 2 0...	10 5	2027	159 13...	8,297 11 0
20..	88 0 0	6¾...	3 1 0...	9 3	2980	196 5...	9,079 11 0
Total for the quarter					14,111	983 2...	£53,320 11 0
Quarter ending June, 1877					13,013	913 19...	57,041 9 6
Quarter ending March, 1877					13,407	898 14...	56,354 9 0
Quarter ending December, 1876					14,120	943 9...	61,079 0 6
Total for the year					54,651	3739 4...	£228,795 10 0
Showing a quarterly average of					13,663	934 16...	57,198 17 6
Corresponding quarter Sept., 1876					14,075	933 14...	65,879 5 6

The ores sold at the Swansea Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
July 10.	£90 11 6	..16 1-16..	£11 0 1...	13s. 8¼	2344	376t 16c...	£25,798 2 0
24.	87 8 9	... 10¼ ...	6 9 8...	12 7¾	3029	340 15 ...	19,644 17 0
Aug. 7.	84 19 0	.. 8 1-16 ..	4 15 7...	11 10...	2516	202 9 ...	12,011 10 0
14.	83 11 6	. 8 13-16..	5 3 0...	11 8¼	1854	163 10 ...	9,551 15 6
28.	82 9 9	... 12⅝ ...	7 10 5...	11 10½	2373	300 6 ...	17,816 7 0
Sept.11.	81 1 9	..12 11-16..	7 7 3...	11 7...	3640	462 17 ...	26,804 12 0
25.	79 14 9	... 16⅞ ...	9 16 3...	11 7...	2216	374 0 ...	21,637 14 6
Total for the quarter					17,972	...2220 13 ..	£133,294 18 0
Quarter ending June, 1877					11,016	...1828 7 ...	124,088 13 6
Quarter ending March, 1877					10,191	...1513 1 ...	109,880 7 0
Quarter ending December, 1876					9,779	...1375 2 ...	102,068 10 6
Total for the year					48,958	...6938 3 ..	£469,332 9 0
Showing a quarterly average of					12,240	...1734 11 ...	117,333 2 3
Corresponding quarter, Sept., 1876					11,867	...1699 5 ...	117,734 3 0

IRON AND STEEL EXPERIMENTS.

Last week a large company assembled at the works of Messrs. D. Adamson and Co., Hyde Junction, near Manchester, to witness a series of experiments for the purpose of testing the endurance of iron and steel plates in resisting percussion force. Amongst the company were Capt. Fraser, of the Royal Arsenal, Woolwich, and Capt. Aynsley and Mr. D. Phillips representing the Admiralty committee on steam-boilers. That steel for boilers, rails, and many other purposes is far more economical than iron we pointed out in a brief article a fortnight ago, and we may say that experiments for testing the strength of steel as compared with iron are by no means new. At Hyde the steel-plates were ⅝ inch thick, and the iron 7-16ths, the quality ranging from ordinary boiler iron to the best classes of steel. The plates were placed singly upon an anvil, the surface of which was concave, and a charge of 1½ lb. of guncotton was fixed about 9 in. above, so that the force of the explosion impinged directly upon the plate below. The result of the experiment was to show that, whilst ordinary boiler iron was indented to the fullest extent of the cavity of the anvil, and fractured, the best steel stood the test remarkably well, and appears to have established the fact that the mild Bessemer steel, and that made by the Siemens process, in endurance and ductility are greatly beyond the strength of wrought-iron. The indenture upon a plate of mild Bessemer tempered in oil was only 1⅞ in., without the slightest fracture, whilst in three other tests of the same steel the indentions were in two cases 1 9-16th in., and in the other 1 11-16th in. The opinions expressed by those present were similar to those enunciated by ourselves on more than one occasion, that steel was far preferable to iron for boilers, rails, tyres, axles, and similar materials. Indeed, for years past iron rails have given way to those made of Bessemer, and few lines where the traffic is at all heavy are without steel rails.

In Russia steel rails are now being put down on all the new lines, and in relaying some of the older ones, and the Russian Government has shown great interest in the matter. The length of the rail in that country has been fixed at 24 ft. English, whilst a system of tests has been laid down and fully carried out, a commission having been appointed for the purpose, as the peculiar climate of Russia requires that the rails shall be of greater solidity and resistance than those necessary for other countries. There are two tests in Russia that are always adopted. In the first the rail is placed on supports 3 feet apart, and bearing for five minutes a weight of 16½ tons it should not give way more than 0·15 of an inch. After withdrawing load the permanent bend should not exceed 0·04 of an inch. second test the rail is placed on supports 3½ feet apart, and bear without breaking the shock of a battering ram of ½ ton from a height of 9⅔ feet. In Russia these steel rails are in favour, and on the Nicolais Railway, on which the greatest has been used (96,000 rails), after three years' service they only a maximum refuse of 0·87 per cent., and a minimum of 0·03 per The result is a most favourable one, seeing that the Nicolais way, a double line, is rated amongst those possessing the traffic in the world. In France the steel rails have also been jected to various tests. In the first, the rail submitted to trial placed upright on two points of support, distant from each 1·10 metre, should be able to bear for five minutes at the mid the interval between the points of support a pressure of 1700 grammes without taking any appreciable permanent set aft test, and a pressure of 330,000 kilogrammes without the defle exceeding 25 millimetres. In the recent test by impact each two portions of rails which have been broken being placed upright on two supports, distant from each other 1·10 fixed on an anvil weighing 10,000 kilogrammes, must sustain out breaking the impact of a monkey, of the weight of 300 grammes, falling from a height of 2·25 metres on the middle distance between the points where the rail is supported.

As we have on several occasions stated that not only rail tyres made of steel were far more economical than iron, and there was every probability that steel plates for our war vessel for boilers will ultimately supersede those of iron, the result experiments made of late have fully borne out our views most important subject of the relative value of steel and ir these most important purposes.

NATIONAL ASSOCIATION OF COLLIERY MANAGERS.

The committee appointed to prepare a detailed statement objects of the proposed National Association of Colliery Ma have displayed satisfactory energy in entering upon the duti trusted to them, for already the subjoined preliminary outlin been drawn up, so as to afford those interested an opportun thoughtfully discussing the several points proposed:—

1.—This Association is for the federation of Colliery Managers holding ment Certificates as such.

2.—The objects of the Association shall be the enrolment of qualified pe members of the Association, which, with the payment of a yearly subscrip 21*s*., shall constitute membership.

3.—The members of the Association so constituted shall form separate s tinct funds for the benefit of those members joining such fund or funds.

4.—These funds shall consist of—
(*a*) Widows, and those dependent on members.
(*b*) Disablement arising from accident.
(*c*) Superannuation or retiring fund.
(*d*) A subsidy fund for general purposes, such as temporary suspensi

The members' annual subscriptions shall form a fund for the constitution tection of the profession, and the conduct of individual cases where consti basis may be menaced.

The separate and distinct funds will be managed so as to be independent other, and members may join any, all, or none, as they individually incli

The educational department has not been overlooked, but at present it s be so hedged round that its arrangements are deferred to the future.

That there is ample room for a successful association of c cated managers there can be no question, and the success or f of the present project will depend in a great measure upon th ceedings of the meeting to be held to-day (Saturday), and th racter of the resolution passed thereat. It was mentioned last that the majority of the speakers at the meeting were of op that the Association should take the form of an assurance or b society, and to this part of the project there can be no valid tion, but the meeting will do well to consider whether the nition of the "subsidy fund for general purposes, such as temp suspension, &c.," will not weaken the society by causing fear part of many who would otherwise become members th National Association of Colliery Managers will speedily dege into a Trades Union of the most dangerous kind—one which apply its funds to compensate and protect members who, been found guilty of infraction of the law made for the equa tection of certificated managers and working colliers, are in t of the law and in public opinion criminals. If the fines in upon individual certificated managers are to be paid by an assoc (which certainly cannot be what the promoters of the present o sation intend, though their programme infers it) the Act of P ment will be rendered useless to inflict other than pretended p ment upon the offenders, and the substitution of imprison without option of fine will become necessary. It may be hope the resolutions passed to-day will have the effect of showing the Association is really worthy of the support of every certi manager in the kingdom.

COAL IN FRANCE.

Our attention has been directed this week to two circumst of considerable interest. The first is the fact that the prod of coal in France has made no progress this year, but has, o contrary, declined rather than otherwise. The second is mor statement than a fact, or even a circumstance; thus we note mark to the effect that English coal has been gaining gro France this year, while Belgian coal appears to have been in less request. With regard to the production of coal in Franc year, an official return which has just appeared shows th extraction to June 30 amounted to 7,852,930 tons. The p tion has thus moved on this year at the rate of 15,705,86 per annum, while the actual production of 1876 was 16,619,50 The French would appear to be more than ever content t a large coal tribute to Great Britain, Belgium, and Germany. true that the extraction of coal from the French soil has larg creased during the past 20 years; but the production has, nev less, wholly failed to keep pace with the demand. The gro railways, the establishment of additional lines of steamers, a generally extended use of steam power have all largely augm the demand for coal among the French; and as they have a people, much natural inclination for coal mining industry, th still fain to rely more than ever—or, at any rate, as much as upon their neighbours for a certain proportion of the coal they require. With regard to the displacement of Belgian c France by our own black diamonds, it is clear that, without way under-rating the natural intelligence or the persevering prise of the Belgians, our own coal mining interest possesses acquired advantages. As Mr. Caird showed, in a recent ad dress, the long immunity which Great Britain has happily e from dynastic change, foreign invasion, or domestic convulsi enabled this country to develope its natural resources upon th approved principles, and to accumulate a larger working than is probably possessed by any other nation. The insular our country has not only enabled it to attain these import sults, but it has also greatly facilitated the development of rivalled mercantile marine; and this is, of course, a most imp element in connection with the creation and extension of a wide commerce, such as that which it is the glory of Great B to possess.

We have heard from time to time of the dangers threate the British iron trade by Belgian metallurgical industry. would not underrate for a moment the merits or the resou Belgian industrials. Considering the waste of life, the p tion of enterprise, and the abstraction of working capital whic the sad consequences of the wars waged in Eastern Europe s years since by Napoleon I., it is truly marvellous that B should have done so much. Even during the 60 years whic glided away since Napoleonic ambition received its death upon the plains of Waterloo the course of life in Eastern has frequently been troubled. But, amidst all the vicis which she has witnessed around her, Belgium has contrived to tain her national independence and her national honour; a only has she done this, but she has also managed to turn the resources of her limited territory to the utmost possible acco secure a large measure of material well-being to her popu at home, and to develope a respectable commerce abroad.

...y cheerfully giving the Belgians all possible credit for what ...y have achieved, we cannot ignore the fact that everything in ...ium is, after all, upon a small scale, and that Belgium cannot, ...equently, seriously compete with Great Britain.

CENTENARY OF THE ROYAL SPANISH SCHOOL OF MINES.—A recent encoenia of the School of Mining Engineers at Madrid, ...the hundredth anniversary of the establishment of the insti...tion, was celebrated with more than usual splendour in the ...ence of the Central University. Amongst those present were his ...llency Señor Don Antonio Cánovas del Castillo, President of ...Council of Ministers; Ilmo. S.D. José de Cárdenas, the director ...al of public instruction, representing the Ministers of Agricul...; Excmo. S.D. Manuel Fernandez de Castro, chief inspector of ...ique of Mining Engineers, and director of the Spanish Geolo...l Survey; Excmo. S.D. Agustin Pascual; S.D. Julian Calleja, the ...t of the medical faculty and rector of the Central University, ...the Royal Mining School Professors Anselmo Sanchez Tirado, ...o Maria Rubio, Eugenio Maffei, Juan Pablo Lasala, Luis ...ano, José Jimenez-y-Frias. and Ramon Pellico; DD. Perfecto ...Clemencin, Casimiro del Valle-y-Arana, Andrés Pellicos, and ...ber of other celebrities who had had the honour of being in... The proceedings having been formally opened by his Excel...y the President of the Council of Ministers, he called upon ...Sanchez Tirado for his address, which was a highly interest...and exhaustive one. Alluding to the establishment of the ...l, he remarked that 100 years ago King Charles III., of blessed ...lamentable memory, who had always the welfare and pro...ity of his people in his mind, brought together a number of the ...intelligent men of the day, and constituted the school. At ...period but three schools of mines were in existence, that of ...berg founded in 1767; that which in 1770 was established at ...mnitz, by the Empress Maria Theresa; and the third which two ...s later was inaugurated at St. Petersburg. The history of the ...ish School from that time to the present is carefully traced, ...mention is made of the transfer of the Rio Tinto mines to an ...ish company, and to the great results obtained by Englishmen ...the Linares district. Don José de Cárdenas. and Señor Fernandez ...ero having addressed the meeting, his Excellency the Presi... announced that the prize of 3000 pesetas offered for the best ...ay on the Metallurgy of Quicksilver in Spain, for which there ...four competitors, had been awarded to that bearing the motto ...e dediciat nec supersit," and upon the envelope being opened ...writer recipient of the honour was found to be Señor Don Luis...-Escosura-y-Morrogh. The centenary has been further cele...ed by the striking of a very handsome bronze medal, bearing ...the obverse the effigy of the Royal founder, with the legend "a ...lo III. rege instituta peractum memorat seculum," and on the ...se an allegorical figure of Mining surrounded by the imple...and emblems of the art, and the legend "Hispana Metallicorum ...omia. Matriti MDCCCLXXVII." The medal is a really ex...piece of workmanship.

ENGLISH AND GERMAN COAL.—The exhibition of German coal ...ent in progress at Hamburg excites much interest amongst Ger... patriots and commercial men. The idea that Germany should en...vour to emancipate herself from the English market, and produce ...own coal, has acquired a powerful hold upon the national ima...tion, and hence promotion and development of the German coal ...has come to be looked upon as a matter of patriotism. It is ...alleged that Westphalian coal is superior in heating power to ...lish, and Senator Godeffroy, in his opening address on Friday ...ning, made it appear that Germany is in possession of coal fields ...mparably larger than any that England can show. The West ...lian coal basin alone, he said, is capable of producing for seven ...uries to come the same quantity of best coal annually which coal ...es at present yield in all England, and beyond this the basin is ...yet fully explored, and is probably capable of material extension.

COAL AND IRON IN THE UNITED STATES.—Some large sales of ...ails have been effected at Philadelphia within the last few ... The prices at which these sales were concluded were, how...the lowest which have ever been known, about $42 to $43 per ...currency was an average, but it is believed that these figures ...ded delivery at tide water. Since the conclusion of these ...actions the market has been tending upwards rather than other...the low prices current as well as the necessities of some roads ...ing brought a number of buyers into the market. Only a few ...lots of iron rails have been sold; there are, however, some ...her enquiries, and it is probable that some contracts will be ...ed in a few days. Little or no improvement has been ex...ienced in bar-iron at Philadelphia, but there is rather a better ...ing in regard to the future. There is nothing new to report in ...ect to steel at Pittsburg; business may be said to be fairly ...e. The market for pig-iron at Philadelphia has been in an un...ed state, the statistical position of the trade appears, however, ...good. The Pennsylvanian coal trade has been tending down...in consequence of the break up of a great combination. In ...Lehigh district wages have been advanced 12½ per cent. since July.

MINERS' NATIONAL UNION.—A financial statement of the opera... of the Union during the last quarter shows that there are now ...districts connected with the Union, the total number of members ...England and Scotland being about 90,000. The total sum received ...contributions and levies during the quarter, including a balance ...hand, was 8460*l.*, of which 7800*l.* has been expended. Mr. Mac...ell, M.P., is President of the Union.

PROPOSED MINERS' PERMANENT RELIEF FUND FOR NORTH ...LES.—A meeting, called by Mr. Henry Hall, Her Majesty's In...tor of Mines for South Lancashire and North Wales, was held ...Chester, on Tuesday, for the purpose of considering the best means ...establishing a Miners' Permanent Relief Society for North Wales. ...There was a large attendance, amongst those present being Mr. J. ...Dudley, Government Inspector of Mines; and Mr. Campbell, ...secretary of the Lancashire and Cheshire Miners' Permanent Relief ...Society, who attended for the purpose of explaining the working ...of that society. Mr. Hall presided. The circular calling the meeting ...stated that "one great object of the proposed society was to do ...away with an anomaly that has hitherto existed in dealing with ...the distress attending colliery disasters. In cases where large ...numbers of lives were lost, the dependent relatives of the deceased ...were invariably provided for by the funds raised by public subscrip...tion, in instances where only one or two lives were sacrificed, ...though there might be large families left and much distress caused, ...there was seldom any awakening of popular sympathy, and the ...widows and orphans were frequently left destitute. The system of ...many clubs which generally prevailed in this coal field gave no ...assurance of constant pecuniary aid to men permanently disabled. ...In very few instances was provision made for the widows and ...children of the men whose lives were lost while following their voca...tion. The society would provide for both these contingencies, and ...by effective organisation seek to make the sufferers by accidents at ...mines no longer dependent upon spasmodic appeals for public ...support. The working of other societies of this nature and their bene...fits were discussed, and the opinion was universally expressed that ...the establishment of such a fund for North Wales was very desirable. ...Finally, on the motion of Mr. Griffiths seconded by Mr. Darby, ...the gentlemen present were formed into a committee to decide as ...to the basis on which the society shall be formed, and to prepare a ...set of rules for its government.

MOTIVE-POWER ENGINES.—The invention of Mr. P. GAMBONI, ...Bagley-street, relates to motive-power engines, in which beams ...work into chambers, at the ends of which a liquid is alternately ...caused to flow as the beam rocks, and these chambers contain ...air flexible vessels, into and from which air is free to enter and ...pass, so that as the end of the beam which is descending approaches ...its lowest position the weight of the accumulated liquid acts upon ...the corresponding flexible vessel to compress it, and force out the ...air. According to one arrangement he places the bag or flexible ...vessel at one end of the beam in communication by a flexible pipe or passage with an air compressor, actuated from a point of the beam intermediate between the chamber and the beam axis. The bag or flexible vessel at the opposite end of the beam communicates with the opposite end of the compressor, as also with apparatus resembling bellows, or with other apparatus for imparting motion, as may be required. In a modified arrangement the beam carries only one water chamber and one air bag or flexible vessel, and the opposite arm of the beam operates a compressor, which, through a column of water, imparts motion to a piston in a cylinder communicating with the interior of the beam, which piston may by its rod be connected with any machine to be actuated.

REPORT FROM CORNWALL.

Oct. 4.—We cannot say there is no news this week. There is not much, it is true, but what little there is is the most cheering that has been heard in Cornwall for many a month. We commented last week on the two little advances of 20s. which the smelters had made, and looked forward to a further improvement, but we hardly anticipated that the upward movement would be continued so speedily, or that if it was it would be so rapid as it has proved. The intelligence that on Monday the smelters advanced the standards 3*l.* spread almost like wildfire through our tin producing districts, and cheered up many a desponding heart. The standards have now been advanced 5*l.* in a fortnight—such a move in the right direction as we have not had since the depression began to set in. And what is better still, all the indications are in favour of this improvement being sustained. It is not merely that tin is in demand for China and elsewhere, but that trade generally does show some signs—albeit yet partial—of improvement, and that in face of the prospective continuance of the war in the East. We may, therefore, expect fairly not merely an increase, but for some time a continuous increase in the demand for this metal. Nor can this be dissociated from an improvement in the markets for our other produce.

It is hardly possible to over-estimate the value of this rise. It means in the present condition of the larger and more important mines, even as it stands, a considerable numerical increase in the Dividend List, while it will enable many others at least to weather the remainder of the storm without entailing further loss on the adventurers. Mining is not what it was half-a-dozen years ago in more respects than one. "Sweet are the uses of adversity" after all, and driven by stern necessity more improvements have been made with regard to the economical production of tin in that short period of time than almost in the preceding half-century. Our mines can now make a profit at prices under which a few years since it would have been thought impossible for them to exist; and there are plenty of indications that a great deal more will speedily be done. It is not expecting too much to look forward to the universal adoption of mechanical boring in all mines of any pretensions within the next two or three years; and, pioneered by such successful miners as Capt. Williams, of Wheal Eliza, tin dressing is rapidly assuming a far more complete and satisfactory character. By-and-bye few will remember what a "Red River" and its wealth meant.

It is needless almost to remark upon the influence which the news of Monday had upon the share market The excitement at the chief mining centres was great, and at Redruth recalled the furor of 1871 and 1872. All good shares are now in request, and not only in request, but scarce. No doubt it is very wise to buy, but it is wiser just now, on the whole, to hold. Whether the tin in stock is likely to be left on the market in such a manner as to produce a temporary retardation of the upward movement we cannot say; we should fancy not. Those who, like Capt. Boyne, have held on so long are likely to look for some more substantial reward, at any rate for the bulk of their store, and so stocking may once more pay after all.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Oct. 4.—Since my last report very little change has taken place in the business doing at the mines and ironworks in Derbyshire. Lead mining goes on but slowly, and the output of lead is very moderate, with but little probability of its greatly increasing. A better demand has sprung up for house coal, more particularly for the London market, where the merchants have recently increased the price 1s. per ton. The best coal in the Metropolis is now 3s. a ton more than it was at the close of June, the greater part of which goes into the pockets of the merchants. Steam coal is still in tolerably fair request, but the season is now close at hand when the consumption will fall off considerably. Engine fuel, gas nuts, and slack are without any alteration worth speaking of. At the ironworks the make of pig has been maintained up to the average, and in some instances there has been a slightly better inquiry, without any alteration in price. The foundries continue to be working steadily—employed in pipes, cylinders, and castings for builders. At Dronfield a fair amount of business is being done in light malleable castings, for which the works of the Messrs. Lucas have long been noted. The Bessemer works, at the same place, have also been doing a good business in rails, the demand for which has largely increased of late, not only on account of the famine in India, but for other countries as well.

In Sheffield there has recently been a decided improvement in several branches of trade, a progress which, during the last month or two has been gradually growing, as shown by previous reports, although the local papers have been slow in admitting that such has been the case. Orders for cutlery and other goods have come more freely to hand, despite the efforts of the American manufacturers to keep the business at home. But there are some of the Sheffield houses that have a name and reputation over all the States for certain goods that cannot be obliterated. Mr. George Wolstenholme, for instance, is a name well known far and wide in America for pen and pocket knives, and those who wish for what they consider a good article look for his brand on making their purchases. Other makers of steel hold a similar position, but in heavy material, such as rails, there is little doing, if anything, so that the American makers absorb that branch almost entirely. Australia and Canada continue to be tolerably good customers, more particularly the former, not only for cutlery but also for light implements and tools. Advices from the Continent for general goods are not at all favourable, but there are some orders on hand for heavy plates for one of the non-belligerent Governments. Our own Government, however, is still about our best customer for armour-plates, but the business doing in them is still only moderate. But it is by no means improbable that there will before long be a considerable change with respect to the covering of our armour-clads, seeing that the iron plates of 22 in. or 24 in. thickness can be penetrated by the projectiles discharged by the heavy guns that have already been made. It is now thought that steel plates can be produced of much greater resisting power than those of iron, and there is very little doubt but that our own Government will solve the problem. The Bessemer establishments are now doing very well, not only on the orders for the East Indies, but on others as well. The former, however, have given a good fillip to the trade, so that for several months to come the mills are likely to be running fully. In crucible steel there has not been much change, and with the exception of some two or three houses the business doing is very quiet. A little more, it may be said, is doing in the best qualities of table cutlery, but in inferior descriptions there has been no change for the better. Silver-plated goods have become in more active request, as is generally the case on the approach of Christmas. Some of the colliery owners in the neighbourhood of Sheffield have advanced their prices, although for what reason has not been stated, unless, indeed, it is because we have reached the cold quarter of the year. Coal is certainly anything but scarce, and the present production could be largely increased were it required by the demand. In London, where a large quantity of Silkstone and other coal is sent by the Great Northern from South Yorkshire, the merchants have also increased their charges by 1s. per ton. These gentlemen must now be realising large profits, for they now obtain for the coal they sell 3s. per ton more than they did about three months ago, whilst the bulk of the colliery owners state that any advance, where such has actually taken place, has been very slight indeed. This state of things is often used as a handle by the miners when there is any stir on the wages question, for they can point out to their employers the prices their coal realises in the London market, not considering that the profits go into the pockets of the merchants. Shipments of steam coal from the Humber keep up very well, but the season is fast drawing to a close.

At the Dodworth Silkstone Colliery, near Barnsley, where the men have been on strike nearly six months, it was expected that this week would see work resumed. But such has not been the case. The points in dispute were left to be decided by arbitration, and as the arbitrators did not agree—of course they never do—Mr. W. Jeffcock, of Sheffield, was appointed referee. On Friday last he made his award, but it did not appear to be satisfactory to the men or the manager, more particularly the latter. The men, however, offered to resume work on Tuesday, but were not allowed to do so. It appears that the question to be decided related to the price to be paid for riddled slack, but Mr. Jeffcock, it is said, went beyond that, and took into consideration what was paid for getting the round coal, in which he gave the men an advance of 2d. per ton. The consequence is that the men are still out, and the colliery standing.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Oct. 4.—The Coal Trade is somewhat disorganised by the course which is being pursued by certain of the miners around Dudley, West Bromwich, and Tipton. They are agitating for an advance in wages, and some of them have given notice for an advance of 1s. a day. That they will, however, push their demands is doubtful, for the Union leaders have expressed their strong disapproval of the men's action. Meanwhile colliery owners will not enter into large contracts, and the enquiries for all classes of fuel, with the exception of household, are considerably fewer than at this season they should be. In the Iron Trade the event of the week is a reduction in the prices of Messrs. E. P. and W. Baldwin's sheets of from 20s. to 40s. a ton on recent transactions. A month ago a drop of 10s. was declared. The firm's "Severn" singles now stand at 11*l.*, and other brands in proportion, E.B. charcoal being 22*l.* Messrs. Baldwin have been compelled to take this course because of the severity of the competition in the best sheet trade. There are firms in the district who are quoting almost profitless rates, and are thereby securing a trade. The Cookley Iron Company, I understand, are about to follow Messrs. Baldwin's example. There is no new feature in the pig-iron trade, and business is generally suspended until the quarterly meetings, which are held in Wolverhampton on the 10th, and in Birmingham on the 11th inst.

Hardly any business worthy of note has been transacted since my last on the Stock Exchange. The Sandwell Park Company's property still sells at 18½; and John Bagnall and Son's shares have changed hands at 3⅜. Wagon companies' property exhibits fair movement, and the debenture bonds of the Pelsall Coal and Iron Company and John Bagnall and Sons are also selling.

The miners in the Lower Gornal, Gornal Wood, and Himley districts are following the example of their brethren in Warwickshire. They have seceded from the Dudley District Union in large numbers, have commenced a "defence" in their own localities, and have determined to divide the money already contributed to the Dudley Association. This action is attributable mainly to the fact that the lodges are making greater demands upon their members than is usual for the sick fund.

Colliery engineers should take warning from the circumstance that on Monday Thomas Harrison, engineer at the Cannock Lodge Colliery, was committed for trial by the local magistrates on a charge of manslaughter. On Sept. 24 he let a miner down the shaft at the colliery with such velocity that the cage crashed through the platform at the bottom into the sump, and the man in the cage was killed instantly, for his spine was broken by the accident. Harrison's defence is that he had no signal that the man was going down, that the steam being on he had no power to stop the engine, for the brakes were not in working order, and that other apparatus necessary for safety were wanting. All this is, however, denied by the head engineer of the company, who states that he examined the engine before the accident, and found the machinery to be perfect.

In North Staffordshire the action of Messrs. Stanier and Co. in giving their miners, furnacemen, and artizans notice for a 10 per cent. drop has been followed by several other firms in the district, and the impression is gaining ground that very soon the whole of the classes of operatives mentioned throughout North Staffordshire will have to submit to a drop in wages. At present the men do not show much disposition to resist, although their leaders urge that since 1874 wages have been reduced 50 per cent. The finished iron trade maintains the recent improvement, and orders are more numerous. The mills devoted to the manufacture of heavy sizes, however, are badly off. Foreign competition they find is very severe, and makers of girders and channels are unable to compete with the Belgians, who are delivering large consignments into the Midlands at prices 20s. to 25s. a ton under the rates of local manufacturers.

The quarterly meeting of the North Staffordshire Iron and Coal Masters, held at Hanley, unanimously decided, on Thursday, to give notice to the employees at the collieries and ironworks of the district, except millmen and furnacemen, that the existing contracts as to wages will terminate at the expiration of a fortnight. It is understood that a general reduction of 10 per cent. will be adopted throughout the district.

TRADE OF THE TYNE AND WEAR.

Oct. 3.—There is a good demand for house and gas coals of best quality, but for steam coal it is very sluggish, as also for most kinds of other coal. In Northumberland great dissatisfaction prevails, and the laying off works and reducing hands still goes forward. The men have refused to act in accordance with the suggestions of Mr. Herschell, with the exception that they agree to work eleven days per fortnight when necessary. Unfortunately, it will seldom be necessary to do this at present. The new system introduced of weighing only the large coal was expected to put an end to many of the evils complained of, but comparatively little progress has yet been made with the system. The necessary erections are costly, and require much time to effect them, and there are also other objections. The system in use in the Midlands in many cases appears to be very simple and fair to both parties; the men are paid (say) 2s. per ton for round coal, and about one-half, or 1s. per ton, for small coal, thus there is an inducement to produce round and not small coal, yet both are paid for.

Consumers of steam coal by sea and land ought to turn their attention to the use of mechanical stokers, as it has been shown very clearly, and it is now to be seen in daily practice, that the use of some of them reduces the amount of manual labour, prevents the formation of smoke, and renders the use of common small coal or drift quite practicable; indeed, steam can be kept up quite as well with this small coal as with best large steam coal hand fired, and great saving results, as one coal is four times the value of the other. Some of these mechanical stokers are extremely simple and cheap, and they can be applied to any kind of boiler, either marine, tubular, or plain cylinder. The introduction of these simple machines, as now perfected, can only be a question of time, and this will have a direct effect in increasing the value of the small coal produced, and thus the miner and the coal master will get an advantage, but the consumer will realise most benefit from the change.

It was expected that the dispute at Ryhope would be finally settled on Saturday, but the parties having failed to agree matters remain as they were. The men are camped out, part of them in the fields, and they are dependent entirely on charity for their support, as they are not allowed any money from the funds of the Union. On the other hand, the masters are under the protection of the Association, so that they are in a much better position than the men, and they will, no doubt, require compensation for their enormous expenses from the Union and the Owners' Association.

There is little change in the Iron Trade here. Shipments, especially foreign, have been large, and the make has been taken off,

but the demand is not sufficient to cause any improvement in rates. In Cumberland and the West Coast the iron trade is brisk, and the Solway Hematite Iron Company are about to light another furnace. The shipments of iron are large, the company just named having shipped over 4000 tons last week. As a consequence, the coal pits in the district are better employed. The steel mills of the West Cumberland and Mossley Works are like most of the steel rail producing works at the present time—fully employed.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Oct. 4.—The Iron Trade continues *in statu quo*, and the coming winter bids fair to be a severe one for the men employed at the various works of the district, as wages are low and continually being reduced, and employment is precarious. We hear on all sides of reductions of wages; in addition to Dowlais, notices to this effect have been given at Rhymney, while at Blaenavon this has already been done. At Briton Ferry notices to terminate contracts at the end of the month have been posted. Prices are low, and the better descriptions of iron are not so much enquired for; consequently, what masters most aim at is increased cheapness in production. In spite of the efforts thus made, very few large orders are placed in the district. Common bars are selling at lower prices than has been the case for some years; but even this fails to infuse activity into the demand, and bars and plates form but a small proportion of the make of the district. The finished department remains in the same state of stagnation, and iron rails are very little enquired for. At the steelworks business is only moderately brisk. Tin plates are firmer in price, but no other change has taken place. Rails are going forward still to British India. The Coal Trade is dull, and winter prospects look gloomy. A fair quantity of coal is shipped to France and the Mediterranean ports. In the western portion of the district trade has slightly revived. Notwithstanding the fact that many of the pits are slackly employed, the output is still considerable, and prices are unchanged; and the same remark applies to freights. The shipments of coal have fallen off during the last few days. Steam coal continues in moderately good request, while house qualities remain materially unaltered. Patent fuel is still rather a slow sale. Nothing authentic has as yet turned up in regard to the future of Plymouth and Abernant; but it is rumoured that a Scotch firm who are interested considerably in the concern have offered to purchase the property.

The Newport Abercarn Colliery Company have now struck the celebrated "black vein" in their second shaft, and there is communication between Nos. 1 and 2 pits. A meeting of the shareholders has been held in London, at which the future prospects of the company were discussed. The shareholders have, the report presented complained, not taken up the debentures offered with that freedom which it was expected they would, and as money was required to complete the sinking of No. 2 pit, the directors took the amount of 15,000*l.* in debentures among themselves. They express the hope that the remaining debentures will be taken up by the proprietary.

The following has been sent to us for publication:—"We, the undersigned, having been appointed by our fellow-workmen to inspect the Clydach Vale Mine on their behalf, hereby declare that the following is a true report of the result of such inspection:—The shafts were securely walled throughout, and the signalling apparatus very good. The levels and planes were well ventilated, and securely timbered throughout. We found a small blower of gas in No. 1 dip heading, east side. The working places were well supplied with timber, and well ventilated. No gas was found in the working faces or roads. The return airways and ventilating apparatus was found in good condition. The old workings were well filled with rubbish. Dated this 29th day of September, 1867.—(Signed) WILLIAM WILLIAMS, JAMES JAMES, colliers."

A charge against a collier named John Parkinson, at Swansea Petty Sessions, tends to show how colliery explosions are caused. The defendant was charged with having a lighted pipe in his possession beyond the lamp station in a colliery at Weigfach. The case was adjourned.

REPORT FROM THE NORTH OF ENGLAND.

Oct. 5.—The attendance on 'Change at Middlesborough this week was about an average, and the same remark applies to the business done, which, however, is not saying much, seeing that the tendency of trade has been so backward for the past few weeks. There is a tolerably fair enquiry for iron for export purposes, and a large quantity is being shipped to Germany, France, and the North of Europe; but the inland consumption is not quite so great as it was, and the local trade is very insignificant. Prices are much the same as those of last week, No. 1 being quoted at 44s. 6d. and No. 3 at 40s. 6d. per ton, less 1 per cent. commission.

I am informed to-day that the returns of the Cleveland Ironmasters' Association, which are just being made up, show a diminished production of pig-iron to the extent of over 1800 tons, as compared with the month of August, while, contrary to general expectation, there is an increase of something like 4000 tons in the stocks, principally in Messrs. Connall's warrant stores, where iron is now being placed for speculative purposes. This is not at all a healthy state of things at a time of the year when the demand ought to be exceptionally active, in view of the approaching close of the navigation season; and there is some reason to anticipate that the quarterly meetings of the North of England iron and allied trades, which are to be held at Middlesborough next Tuesday, will not bring with it any substantial improvement in trade.

The Finished Iron Trade is not changed in any important particular. The plate manufacturers are doing a tolerably good business, with prices cut extremely fine. No notice has this week been given by either employers or employed for a change in the rate of wages fixed by the recent award of Mr. Dale, so that the wages paid to finished ironworkers for the next six months must remain the same as at the present time.

In the ironstone mining district of Cleveland very large stocks of ironstone have been accumulated, and the prospects of the future are increasingly depressing. Some eight or nine mines are now entirely inoperative, leading to the idleness of from 2000 to 3000 workmen of all classes. The drilling machine, respecting which Mr. W. Walker was to have read a paper at the recent meeting of the Iron and Steel Institute, is still being worked at the mines of Messrs. Bell Brothers, but the exact results are not yet sufficiently matured to enable me to speak of them.

The engineering and shipbuilding trades in the Cleveland district are making pretty good time, only two or three establishments working reduced hours. The Cleveland Shipyard, Middlesborough, has sufficient work on hand to employ 1200 to 1300 men.

REPORT FROM THE FOREST OF DEAN.

Oct. 4.—Little change has occurred since our last report, but we are pleased to be able to say that the improvement in the coal trade which we recently reported is fairly maintained, although we regret to add that it does not extend to all the collieries of the Forest, but is partial, and is felt more on the eastern side than on the western part of the Forest coal field; indeed, there is a large amount of slackness in trade in West Dean, and a vast amount of suffering amongst working people in consequence. At one or two collieries on the western side there is activity, but what are they among so many, or such a comparatively large population, seeing that most of the iron mines are idle, as well as the steelworks and the Parkend furnaces. Some are emigrating and a few migrating, and many suffering at home. There is more agricultural employment in and around West Dean, but even the farms cannot absorb much of the surplus labour from iron mines and collieries. Still, with these sad drawbacks, there is undoubtedly improvement in the Forest trade, but it is not so good by any means on the eastern side, as all would be glad to welcome and realise. There has been a fair business for some little time past at the forge of the Forest Vale Ironworks, and we are pleased to add that trade is improved at the tin-plate works at Lydbrook and Lydney, notwithstanding that the mills are idle every third week. They would at present be in ordinary full work but for the limitation agreed upon by the South Wales Tin-Plate Masters' Association, that association having pledged itself for all its members to keep their mills idle one week in three, under a forfeiture of 500*l.*, which bond will remain in force till January next. The iron trade is still dull, and we fear that the rumours respecting blowing in furnaces at Parkend, and an additional one or two at Cinderford, must be looked upon as canards, or else that the wish for improvement in the iron trade has been the unsconscious father to the thought. Some further re-adjustments as to the membership in the firm of the Great Western Iron Company, are spoken of as likely to occur before the Sewdley Works will again get into working order and activity. The Whinsey and Mitcheldean road line is still in suspense, and the works idle, and, strange to say, the meeting of directors advertised for an early day last month has twice been adjourned, or, rather postponed, and according to our information has not yet come off. Whether this delay bodes good or evil we are unable to say. There is no doubt but the line, when completed and opened, will be a valuable outlet for produce and traffic if properly managed and worked. The Coleford Local Board appears to be likely to get over some of its difficulties, and to work more peaceably, although its public works business has not been very satisfactory to the public of the neighbourhood. The Cinderford Water Works mains are now all laid in, the last being put in near Drybrook on Thursday of last week; but the pumping apparatus will not be completed for some weeks to come; and all the connections with houses have also to be effected before the works can be brought into full play. We expect, too, that some difficulty will be experienced in the adjustment rate necessary, and the extent of its application. But when the waterworks are completed it is expected that the question of new roads will come to the front again; but we note, in reference to that proposal, the opposition of the working men, or of a considerable part of them, though most strangers visiting the district will be and have been forcibly impressed with the need there is of the people mending their ways. We are not aware of any recent change in prices, nor do we think it would be wise for coal to be advanced in price under present circumstances, and we further think that the coalmasters are possessed with a similar conviction.

GOLD IN AUSTRALIA.—The total amount of gold exported from the colony (of Victoria) from the beginning of the year to Aug. 2 was 260,702 ozs. During the corresponding period of last year the entire quantity exported was 305,015 ozs.

RUSSIAN GOLD MINES.—Although the mining operations in Russia are conducted so quietly that little of them is known outside, the result is by no means small. Mining is carried on over a region of over 2,000,000 square miles. The yield, according to a recent work by M. Bogulusky, averages $15,000,000 a-year—a much larger product than is usually credited to the Russian mines.

NEW WORK ON VALUATION.—We learn with pleasure that Messrs. Longmans and Co. will shortly publish a new and important work on the valuation of collieries, iron mines, and all other kinds of mineral property. The members of the profession with which the work is more especially identified will be indebted in no small degree to the ability and industry of the author—Mr. H. D. Hoskold, C. and M.E., F.G.S., F.R.G.S., &c, for this very valuable addition to mining literature. The tables are said to be exceedingly comprehensive and elaborate, and as they are entirely new their computation must have been a work of immense labour. As regards the accuracy of the principles on which the tables are based, we need only mention that that eminent mathematician and actuary, Peter Gray, F.R.A.S., F.R.M.S., &c., has, we understand, written an introduction to Mr. Hoskold's work, fully endorsing the principles laid down by that gentleman. The publication of the book (which is indeed a pioneer on the subject upon which it treats) will be exceedingly opportune, considering the unsettled state of opinion upon the important matters with which it deals, and the diverse and conflicting methods of valuation which are at present practised by engineers, surveyors, professional valuers, and others. Mr. Hoskold is already well known among professional men as an author of ability and accuracy, and his name, coupled with that of Mr. Gray, will at once commend his work to the attention and careful consideration of that large and highly scientific body of men comprising the profession to which he belongs, and, indeed, to all business men who may be engaged in important financial speculations. We believe Mr. Hoskold has been staying at Penzance, in Cornwall, during the time his work has been passing through the press, where he much enjoyed the mild climate and splendid scenery after the fatigue of his arduous undertaking. We must reserve a detailed notice of the book until after publication.

The "RAINBOW," for October (Elliot Stock, Paternoster-row) has just been published, and is more than usually rich in what may be termed scientific, theological, and biblical articles. There has been a great want of a magazine of this description, and the Rev. Wm. Leask, D.D., has supplied the desideratum. The leading article, "Speaking for the Future," is from the pen of the Editor, and is one of the most thorough logical and lucid essays on the subject which even the learned and gifted author has produced. Mr. Maude contributes an elaborate article on "The Rationale of the Resurrection of the Dead." Abraham's Night's Vision at Beersheba," and "Cherubic Phenomena," by W. Morris, M.D., are excellent specimens of exegetical learning. "Notes on 2 Tim. III., IV.," are contributions of valuable Greek criticism. There is a learned review of "A Critical Lexicon and Concordance to the English and Greek New Testament," with an index of Greek words, by the Rev. Ethelbert W. Bullinger, St. Stephen's, Walthamstow; a work of great merit. Perhaps a larger proportion of readers of the *Mining Journal* are conversant with physical and metaphysical learning than those of any other London weekly paper, as their pursuits naturally lead them to the study of science in all its departments; and a perusal of the October number of the "Rainbow" will not disappoint them.

WEST CALDER.

VALUABLE SMALL MINERAL ESTATE.

BE SOLD, BY PUBLIC ROUP, within Dowell's Rooms, George-street, Edinburgh, on Tuesday, the 23rd October next, at Two the LANDS and ESTATE of BROTHERTON, near WEST CALDER, Shale, Limestone, Freestone, &c., as previously advertised. will be exposed at the reduced upset price of £6000, and further par- may be had from JAMES ROBERTSON, Solicitor, 4, Lindsay-place, Edin- in whose hands are the Titles, Articles of Roup, Analysis of Shale, &c.

TO MINING CAPITALISTS.

BE DISPOSED OF, on very reasonable terms, the WHOLE PART of the INTEREST in a NINETY-NINE YEARS' LEASE of a COAL FIELD (with railway communication), and TEN adjoining LEAD MINES, in CENTRAL SPAIN. can apply, by letter, for further particulars to "F. R. G. S.," Carlton Pall Mall, London.

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BE LET, with immediate possession, for a term to be agreed upon, the RIGHT OF WORKING the above Mines, extending over the or TENEMENTS called CWMMYDION UCHA, NANT-Y-RHYDIL LANDWGA, with the lands adjacent thereto, containing together about 3a. 36p.

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desirous of taking the same are requested to state in writing the amount minimum dead rent they are willing to pay, together with the royalty into the same.

particulars may be obtained of Messrs. COTTERELL and SPACKMAN, Walks, Bath, to whom tenders are to be sent on or before the 1st of next.

highest or any tender will not necessarily be accepted.

SALE, TANK LOCOMOTIVE, cylinders 10 in. by 16 in., four wheels, 2 ft. 9 in. diameter, copper firebox, brass tubes, steel tyres, and machinery of best Yorkshire iron, made by Hudswell, Clarke, Leeds, in July, 1875; overhauled and new tubes this year. Cost Will be sold cheap to an immediate purchaser.

WIRE ROPE, 333 yards long, 1 in. diameter, fitted with couplings at as good as new. Also, POWERFUL and VALUABLE PUG (or clay with large spur and fly wheels, bed plates, housing, axles, and other fittings, and Co., London. Only in use three months, £30. Ditto, ditto, ditto, never used, £40.

McDERMOT'S PATENT ROCK PERFORATORS, with large quan- steel drills for ditto; quite new. To be sold cheap—say £8 each. particulars and where to be seen, apply, by letter, to N. B. FOGG and Co., hall-road, Liverpool.

SALE, BY PRIVATE TREATY, a POWERFUL DIRECT-ACTING PUMPING ENGINE, with bell cranks, &c., complete, foundations, with condenser attached, cylinder 36 inches diameter and with 5 feet stroke in pumps. The engine may be seen at work on to the Manager at the Eskett Iron Ore Mines. It has been in use and is in good order and repair.

ONE SET (40 fathoms) of 18 inch PUMPS, with 17 inch hollow ram. 16 inch PUMPS, with 15 inch hollow ram, complete.

machinery can be removed in a few weeks.

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SALE, EVERY DESCRIPTION of COLLIERY and ENGINEERS' STORES.

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Introductory Note by P. GRAY, F.R.A.S, Hon. Memb. Inst. of Actuaries.

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MR. EDWARD SAUNDERS has received instructions to offer the ABOVE FOR SALE, BY AUCTION, at the Mart, Tokenhouse-yard, near the Bank of England, on Tuesday, October 16, at Two precisely.

Particulars and Conditions of Sale may be had 14 days prior to the Auction, of SHELDON D. ASHBY, Esq., Solicitor, 9, Clement's-lane, Lombard-street, E.C.; at the Auction Mart; at the Bedford Hotel, Tavistock; the Royal Hotel, Plymouth; and of Mr. EDWARD SAUNDERS, Auctioneer, and Land Agent and Valuer, 61, Bishopsgate-street Without, London, E.C., and Kingston on-Thames.

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MESSRS. CHURTON, ELPHICK, AND CO. beg to announce that they have been instructed to SELL, BY AUCTION, on Tuesday and Wednesday, October 16th and 17th, 1877, commencing each day at Eleven for Twelve o'clock punctually, the WHOLE of the extremely

VALUABLE PLANT AND MACHINERY,

Including TWO horizontal high pressure STEAM ENGINES, about 8-horse power, with BOILERS and connections; double action PUMPING ENGINE, with BOILERS and connections; DONKEY ENGINE; Hind's patent cart weighing machine, by Kitchin, Warrington; smaller ditto, by Pooley and Sons; large lead chambers, tanks, cisterns, rolls of new lead, &c., containing about 100 tons of sheet lead and piping; soda ash mill, with French stones and connections; mortar mill, finishing furnaces, salting down pans, burners, black ash furnaces, condensers, iron pillars; large quantities of firebricks; contents of smiths' and carpenters' shops; wrought and cast iron tanks; crab winch; tank plates; copper boiler; iron wheelbarrows and bogeys; quantity of caustic soda drums; timber in the round, planks, boards, and scantling; wrought and cast scrap iron; and other miscellaneons effects.

Further particulars and catalogues may be had by applying to H. A. COPE, Esq., solicitor, Holywell; Messrs. BROOMHEAD, WIGHTMAN, and MOORE, Solicitors, Bank Chambers, George-street, Sheffield; or to Messrs. CHURTON, ELPHICK, ROBERTS, and RICHARDSON, the Auctioneers, Chester.

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Catalogues are in course of preparation, and may be had on and after Monday, the 8th October, from the Auctioneers; Messrs. THOMAS, WADE, GUTHRIE, and Co., Accountants, Manchester; Mr. T. L. COTTINGHAM, Mining Engineer, Chester; and Mr. ROBERT JACKSON, Solicitor, Rochdale.

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VALUABLE SLATE QUARRIES,

Which are most conveniently situated at Llanberis, on the side of a sloping hill affording plenty of fall for tips, and self-draining.

The various workings have been opened out at a large expenditure of capital. There are four distinct veins running through the property, which are worked, and there are two as yet quite undeveloped, but which have been partially tested in the adjoining properties, close to the boundary, both being of superior quality, fine in grain, and a good splitting rock.

There are five large workings and extensive floors have been uncovered to a considerable depth, leaving exposed for immediate quarrying a great mass of solid rock, producing slates which command the highest price in the morket.

The property is situate almost immediately opposite the Great Dinorwic Quarries, and lies between the Glynrhonwy and the Goodman Quarries, having a separate and convenient connection with the London and North-Western Railway to all parts of the country, with sidings and a right to bridge over the railwey to the lake, and slates can thus be delivered on the railway at a very small cost.

The property is held under lease for a term of twenty years from the 29th day of September, 1868, renewable on most favourable terms for above seventy years. The dead rent is only £20 per annum, merging into a small royalty of 2s. per ton for all slates and slabs (except moss slates, for which a royalty of 1s. per thousand is charged).

By an agreement, granted for five years from 1st January, 1877, and renewable. the proprietors of Cefn Du Quarries pay a toll for transit of their slates over the Cambrian inclines, and a considerable revenue is now derived from this source. The purchaser of the lease will have to take the whole of the plant and machinery in connection with the incline (which comprises a 14-horse power horizontal steam engine by De Winton and Co., incline drums, wire ropes, rails, &c.), at a valuation, with the option of taking the remaining plant, wagons, &c., at a valuation in the usual way.

Intending buyers are respectfully requested to view these works at the earliest opportunity, as they are now in operation, and the foreman on the premises, Mr. David Jones, will show intending purchasers over the works.

A copy of the several leases and agreements may be inspected at the office of Mr. A. F. HAMILTON, C.A., 68, St. Vincent-street, Glasgow; Mr. T. K. HOLMES, 18, Abingdon street, Westminster, London; Mr. J. W. HUGHES, Solicitor, Bangor; and at the Auctioneers' Offices, Wellfield House, Bangor, and Town Hall, Rhyl; where also lithographed plans of the property, and full detailed particulars, may be had; and at any of the principal hotels in the county; and at the office of this paper.

TO BE SOLD, BY PRIVATE CONTRACT, all the ESTATE and INTEREST of Messrs. FORDS and MART, as lessees of and in the valuable COAL MINES and WORKS, situate at MAREHAY, RIPLEY, DERBYSHIRE, inclusive of the ENGINES and other PLANT, UNDERGROUND RECOVERIES, and WORKS.

This colliery contains upwards of 200 acres, and is held by the present lessees on 60 years' lease, about 56 years of which are unexpired, on moderate royalties, and on a minimum rent (lapsing into the royalties) of £400 per annum.

The works at present are not fully developed, but the prospects are very good on a suitable outlay of capital being made.

The leases may be seen at the offices of Messrs. CHALLINER and Co., Solicitors, Leek; and further particulars and forms of tender may be had on application to the Manager, Mr. CHARLES FORD, Jun., at the offices of the colliery, Marehay, Ripley, to whom the tenders must be sent on or before October 20th, 1877. The highest or any tender not necessarily accepted.

SADDLE-BACK LEAD MINING COMPANY

(LIMITED).

TO BE SOLD, as a going concern, all the INTEREST of the above company in the EXTENSIVE PROPERTY, formerly known as the WOOD-END AND GATEGILL MINES, now known as the SADDLE-BACK MINES, situate near Threlkeld, Keswick, Cumberland, and also the WHOLE of the PLANT upon the said Mines.

These Mines have been very productive of lead, and the prospects for immediate improvement are very great.

Four veins can be seen in the sett, which is upwards of one mile square.

The Mines may be inspected on application to Mr. WM. PORTER, Threlkeld, and full particulars as to lease, terms, &c., obtained from the Secretary, to whom offers must be sent on or before the 1st of November, 1877.

Annan, Sept. 26, 1877. WILLIAM DOBBIE, Secretary.

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Are now in a position to SUPPLY their "SPECIAL" LUBRICATING OIL, PAINTS, PAINT OILS and VARNISHES of all kinds, TALLOW, SPUN YARNS, GREASE, COTTON WASTE, LEATHER BELTING, INDIA-RUBBER GOODS and STEAM PACKING, NAILS, BOLTS, RIVETS, VICES, &c., from stock, in large or small quantities, on receipt of orders.

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PATENTEE OF THE IMPROVED APPARATUS FOR PREVENTING INCRUSTATION IN BOILERS, &c.

MANUFACTURER OF SUPERIOR

GUN METAL STEAM COCKS, VALVES, BOILER MOUNTINGS, And CAST IRON STEAM and SAFETY VALVES, with GUN METAL SEATS.

ALL ORDERS PROMPTLY EXECUTED.

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VALVES AND STEAM COCKS.

Cast-iron Steam Valve, with Gun Metal Seats, new and improved pattern. (with flanges.)

(Screw Gland.) Gun Metal *Screw* Gland Steam Cock (black), shell pattern, female ends.

(Pin Gland.) Gun Metul *Pin* Gland Steam Cock (black), shell pattern, female ends—

Prices—	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
	2s. 8d.	3s. 4d.	4s.	6s.	9s. 6d.	13s. 6d.	21s. 6d.	32s. each.

(Screw Bottom.) Gun Metal Screw Bottom Steam Cock (black), shell pattern, female ends, or male and female ends—

Prices—	¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
	2s. 3d.	2s. 9d.	3s. 3d.	4s. 6d.	8s. 6d.	12s.	17s. 6d.	26s. each.

(London Pattern.) Gun Metal Steam Cock, London shell pattern, polished bright, male and female ends; the heaviest in the trade—

½ in., 4s. 6d.; ¾ in., 7s.; 1 in., 10s.; 1¼ in., 15s.; 1½ in., 22s.; 2 in., 36s. each.

Gun Metal Steam Valves, brass or iron wheels; improved, screwed female ends—

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	2¼ in.	2½ in.	3 in.	3½ in.	4 in.
4s. 6d.	6s. 6d.	8s. 6d.	11s. 6d.	14s.	22s. 6d.	35s.	48s.	60s.	80s.	120s. each.

The same with Flanges—

½ in., 7s.; ¾ in., 8s.; 1 in., 12s.; 1¼ in., 17s. 6d.; 1½ in., 20s.; 2 in., 32s. 6d. each

Gun Metal Ground Steam Union Joints—

¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
2s. 6d.	2s. 9d.	3s.	4s.	5s. 6d.	7s. 6d.	10s. 6d.	16s. 6d. each.

Gun Metal Clack or Back Pressure Valve for Feed Pipes from Pumps or Injectors to Boilers—

⅜ in., 4s.; ½ in., 4s. 6d.; ¾ in., 6s.; 1 in., 8s. 6d.; 1¼ in., 11s. 6d.; 1½ in., 14s. each.

Gun Metal Stuffing Box, Expansion Joints for long lengths of Piping—

½ in., 4s.; ¾ in. 6s.; 1 in., 8s.; 1¼ in., 11s.; 1½ in., 14s.; 2 in., 21s. each.

Gun Metal Safety Valve, with Lever—

½ in., 6s.; ¾ in., 8s.; 1 in., 10s.; 1¼ in., 12s. 6d.; 1½ in., 15s.; 2 in., 20s. each.

Gun Metal Steam Whistle—

1¾ in., 9s. 6d.; 2 in., 12s.; 2½ in., 16s.; 3 in., 25s.; 3½ in., 33s.; 4 in., 40s. each.

Single Tallow Cock—

1½ in.	2 in.	2½ in.	3 in.	4 in. diameter of Globe.
4s. 6d.	6s. 6d.	8s. 6d.	12s. 6d.	17s. 6d. each.

Double Tallow Cock—

1½ in.	2 in.	2½ in.	2¾ in.	3 in.	3½ in.	4 in. diameter of Globe.
7s.	9s. 6d.	12s.	14s.	16s.	18s.	24s. each.

Gun Metal Throttle Valves, screwed for iron pipe—

¾ in., 6s. 6d.; 1 in., 9s. 6d.; 1¼ in., 14s.; 1½ in., 19s. 6d.; 2 in., 33s. each.

Gun Metal Pet Cocks, with cleaning screw—

⅜ in., 3s. 11d.; ½ in., 4s. 5d.; ⅝ in., 6s.; ¾ in., 7s.; 1 in., 10s. each.

Gun Metal Pet Cock—

⅜ in., 3s. 8d.; ½ in., 4s. 6d., ¾ in., 6s. 9d. each. Screwed.

Gun Metal Blow-off Cocks—

¾ in., 7s. 6d.; 1 in., 10s. 6d.; 1¼ in., 14s. 6d.; 1½ in., 19s.; 2 in., 33s. each.

GUN METAL WATER GAUGE MOUNTINGS.

Set of Gun Metal Gauge Mountings, ebony handles, ordinary pattern.

½ in glass ... ... Per set 16s.

Ditto ditto ditto ⅝ in. glass ... ... 23s.

Ditto ditto ditto ¾ in. .. .. 30s.

Set of Gun Metal Water Gauge Mountings, with solid bottom cocks and gun metal packing rings ground on to top of plugs, thus preventing the possibility of leakage, with back nuts and cleaning screws; gun metal handles, bored for either ½ in. or ⅝ in. glass ... . 31s.

Set of Gun Metal Water Gauge Mountings, similar to the above, but with gun metal flanges, bored for ½ in. or ⅝ in. glass ... ... 34s.

Set of magnificent Gun Metal Water Gauge Mountings, very heavy, with solid bottom cocks, as above, with cleaning caps, back nuts, &c., &c., bored for either ⅝ in. or ¾ in. glass ... ... 44s.

Ditto ditto ditto bored ⅞ in. glass ... ... 56s.

Set of Gun Metal Water Gauge Mountings, with screwed bottom, brass handles, back nuts, and cleaning screws, bored for ½ in., ⅝ in., or ¾ in. glass ... ... 27s.

Set of Gun Metal Gauge Mountings, similar to the above, but lighter, and bored for ½ in. or ⅝ in. glass ... ... 23s.

Set of Gun Metal Water Gauge Mountings, similar to the above, but lighter, and bored for ½ in. glass. These are suitable for Agricultural Engines 18s. 9d.

Set of Gun Metal Gauge Mountings, with hollow plugs, upon Needham's principle (suitable for locomotives), bored for ⅝ in. or ¾ in. glass... ... 36s.

Set of "Valve" Gun Metal Gauge Mountings (¼ turn to blow off), with back nuts and ebony handles, bored for ½ in. or ⅝ in. glass ... ... 28s.

BEST GREEN GAUGE GLASS TUBES.

Inches long.	½ in. s	d	⅝ in. s.	d.	¾ in. s.	d.	⅞ in. s.	d.	1 in. outside diam. s.	d.	
12	3	9	4	6	5	4	6	8	8	0	per doz.
13	4	0	5	0	6	0	7	4	8	8	"
14	4	3	5	6	6	8	8	0	9	4	"
15	4	6	6	0	7	4	8	8	10	0	"
16	4	9	6	6	8	0	9	4	10	8	"
17	5	0	7	0	8	8	10	0	11	4	"
18	5	3	7	6	9	4	10	8	12	0	"
19	5	6	8	0	10	0	11	4	12	8	"
20	5	9	8	6	10	8	12	0	13	4	"
21	6	0	9	0	11	4	12	8	14	0	"
22	6	3	9	6	12	0	13	4	14	8	"
23	6	6	10	0	12	8	14	0	15	4	"
24	6	9	10	6	13	4	14	8	16	0	"

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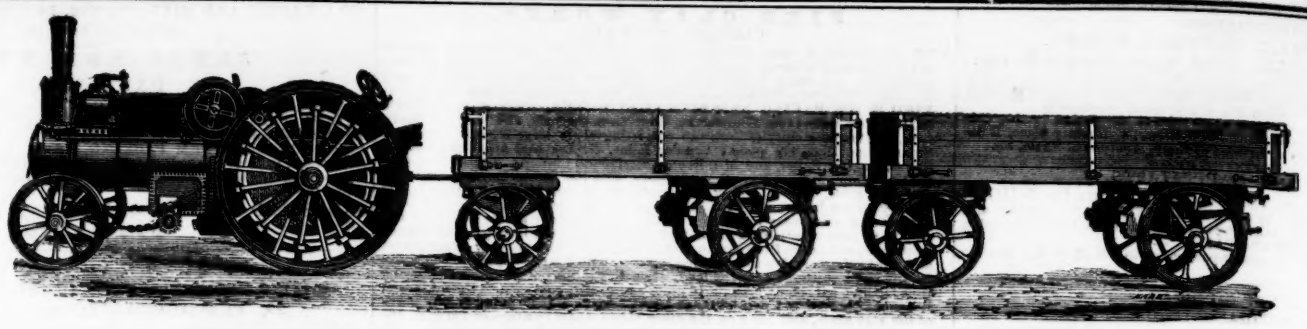

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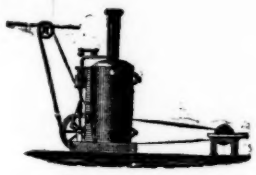

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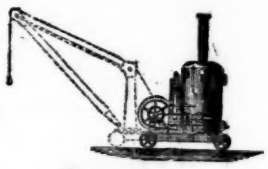

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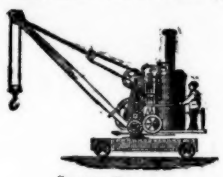

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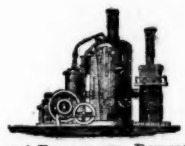

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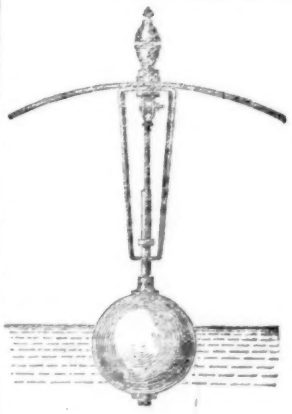


Johnston's Patent Self-acting Alarm Whistles.

EXPLOSIONS FROM STEAM BOILERS have become so frequent, and are often attended such serious results both to life and property, that any improvement tending to secure their s cannot fail to be appreciated. From numerous examinations, made after explosions, by pract engineers, the great majority of accidents that occur are considered the result of a deficienc water in the boilers. Experience has proved that it is good policy to furnish each boiler this Self-acting Alarm, so constructed that, upon the water getting below a certain level, noth can prevent the opening for the steam to act directly upon the instrument and cause the alar

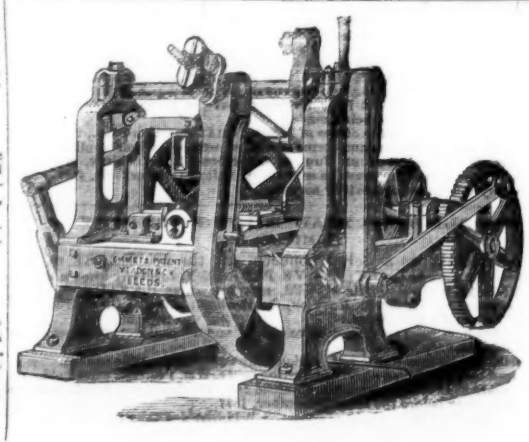
The hollow cast-iron float is made sufficiently heavy that, on falling with the water, it ca fail in opening the orifice, as the apparatus is entirely free from all stuffing-boxes, glands, co or any other contrivances which are so frequently found to operate against the proper actio alarms. The float is so constructed that it cannot become waterlogged. As long as there sufficiency of water in the boiler, the alarm valve is kept close against its seat by the float.

A loose pin at the top of the whistle enables anyone to test the alarm at a moment's notice.

Practical men consider this the best Alarm hitherto offered.

The Engraving shows the mode of fixing to boiler, also the water level. In ordering, the meter of the boiler should be given, and also the diameter of the flue when there is one, also distance from top of flue to top of boiler, or send sketch.

The use of these Alarms in large works, extending over a period of fifteen years, and num ing over 4000, is a guarantee in itself of their efficiency and safety.



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This is the ONLY Machine which presses the Brick equa BOTH sides, each plunger entering the mould plate turning out 12,000 SQUARE, SOLID, PRESSED Bricks pe READY AT ONCE FOR THE KILN.

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SAFETY is evidenced by the total ABSENCE OF ACCIDENTS in transit and storage; it is insensible to heavy shocks ANT POWER being only fully developed when fired with a powerful percussion detonator, and hence its great safety.
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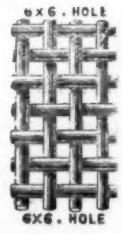

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		12 11 8	0 5 0	Jan. 1876
15000	Balmynheer, t, Wendron (4000 to is.)	1 0 0	—		0 2 0	0 2 0	Nov. 1875
30000	Bampfylde, c, i, mn., Devon*	1 0 0	1⅝	1⅜ 1⅝	0 2 0	0 2 0	June 1873
4000	Brookwood, c, Buckfastleigh	1 16 0	1	½ 1	3 16 0	0 2 0	Nov. 1877
2000	Bryn Alyn,* l, Denbigh. (10l. sh.)	8 0 0	—		0 7 0	0 7 0	Jan. 1875
6400	Cashwell, l, Cumberland*	2 10 0	2¼	2 2¼	1 9 6	0 2 0	Aug. 1876
1000	Carn Brea, c, t, Illogan†§	36 7 6	23	29 31	308 0 0	1 0 0	Feb. 1874
2450	Cook's Kitchen, t, Illogan†§	23 17 3	2s.	1 1¼	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†*	1 0 0	3½	3¼ 3½	116 15 0	0 5 0	July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	27	29 31	111 16 3	0 5 0	Sept. 1877
5000	East Black Craig,* l., Scotland	5 0 0	—		0 10 0	0 10 0	Feb. 1877
300	East Darren, l, Cardiganshire	32 0 0	—		235 10 0	1 0 0	Aug. 1876
6400	East Pool, t, c, Illogan	0 9 9	8	7½ 8	15 2 3	0 2 0	June 1877
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1¼	1 1¼	0 12 10	0 0 6	Mar. 1877
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	6½	5½ 6½	0 5 0	0 5 0	Aug. 1877
15000	Great Dyliffe,* l, Montgom	4 0 0	4	3 4	0 2 6	0 2 6	Apr. 1876
15000	Great Laxey, l, Isle of Man*	4 0 0	21	20½ 21½	22 3 0	0 10 0	July 1877
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—		0 1 6	0 1 6	May 1876
25000	Gt. West Van, l, Cardigan,* pref.	2 0 0	⅜	¼ ⅜	0 2 0	0 1 0	Aug. 1874
6400	Green Hurth, l, Durham*	0 6 0	3	2¾ 3	1 15 0	0 3 0	Aug. 1877
20000	Grogwinion, l, Cardigan*	2 0 0	3½	2½ 3½	0 12 0	0 4 0	Feb. 1877
9830	Gunnislake (Clitters'), t, c	5 5 0	2¾	2½ 2¾	0 13 9	0 1 0	Oct. 1876
1024	Herodsfoot, l, near Liskeard†	8 10 0	7	6 7	62 5 0	0 15 0	Oct. 1872
18000	Hingston Down, c, Calstock*†	0 4 0	½	¼ ½	0 1 0	0 1 0	Nov. 1875
60000	Holmbush, a, c, s-l, Callington*	1 0 0	2	1¾ 2	0 3 6	0 0 6	July 1877
2800	Isle of Man, l, Isle of Man*†	25 0 0	—		82 5 0	0 10 0	Feb. 1876
20000	Leadhills,* l, Lanarkshire	6 0 0	5½	5 5½	0 12 0	0 6 0	Oct. 1877
400	Lisburne, l, Cardiganshire	18 15 0	80	75 80	582 10 0	1 0 0	July 1877
14000	Llanidloes,* l, Montgomery	3 0 0	2½	1½ 2½	0 9 0	0 4 6	Nov. 1876
5120	Lovell, t, Wendron	0 16 0	—		0 17 6	0 1 6	Jan. 1874
9000	Marke Valley, c, Linkinhorne	5 3 6	1	¾ 1	7 15 0	0 2 0	Jan. 1876
9000	Minera Mining Co., l, Wrexham*	5 0 0	19½	17½ 19½	67 5 2	0 5 0	Aug. 1877
20000	Mining Co. of Ireland, cl, c, l*	7 0 0	—		23 11 6	0 3 6	Jan. 1876
444	North Busy, c, Chacewater	3 9 6	—	4 5	1 10 0	1 0 0	July 1877
10289	North Hendre, l, Wales	2 10 0	—		1 12 6	0 2 6	Aug. 1877
6000	Pedn-an-drea Con., t, Redruth	0 8 6	7½	6¾ 7½	0 9 0	0 9 0	June 1877
5000	Penhalls, t, St. Agnes	3 0 0	¾	½ ⅜	3 13 6	0 2 0	July 1876
6000	Pennant, l, bar, North Wales*	5 0 0	5½	5½ 6	0 5 0	0 5 0	Mar. 1877
45793	Penstruthal,* t, c, Gwennap	2 0 0	⅜	¼ ⅜	0 2 8	0 0 8	Nov. 1875
12000	Phœnix, & W. Phœnix, t, c, Link.§	3 4 9	4½	4 4½	2 9 6	0 4 0	Nov. 1872
18000	Prince Patrick,* s-l, Holywell	1 0 0	2¼	1¾ 2¼	0 14 0	0 1 3	Jan. 1876
12000	Roman Gravels, l, Salop*	7 10 0	9½	8¾ 9½	7 10 6	0 8 6	May 1877
512	South Caradon, c, St. Cleer	1 5 0	110	90 100	739 10 0	1 0 0	Oct. 1877
6123	South Condurrow, t, c, Camborne‡	6 5 6	7¾	7½ 8	2 18 0	0 6 0	Sept. 1877
12000	St. Harmon,* l, Montgom	3 0 0	3½	2½ 3½	0 3 0	0 3 0	Jan. 1877
1[illegible]000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1875
1[illegible]000	Tankerville, l, Salop*	6 0 0	6½	5¾ 6½	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	10	9 10	50 8 6	0 5 0	May 1877
15000	Van, l, Llanidloes*	4 5 0	32	30 32	22 3 6	0 12 0	Oct. 1877
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	15	14 16	55 0 0	0 10 0	Jan. 1877
1783	West Poldice, St. Day	10 0 0	13	11 13	1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	77	74 76	22 5 0	1 10 0	Aug. 1877
2048	West Wheal Frances, t, Illogan	28 1 3	1½	2½ 3½	3 12 6	0 5 0	Oct. 1872
12000	West WyeValley,* l, Montgom	3 0 0	3	2 3	0 6 0	0 3 0	Nov. 1876
1024	Wh. Eliza Consols t, St. Austell	20 0 0	—		15 0 0	2 0 0	Aug. 1877
2048	Wheal Jane, t, Kea	2 18 10	¾	¾ 1	8 5 0	0 5 0	July 1875
4295	Wheal Kitty, t, St. Agnes	5 4 6	1½	1½ 2	11 19 6	0 2 6	Dec. 1874
25000	Wh. Newton, a, c, s, t, Calstock*	1 0 0	5½	5 5½	0 4 6	0 4 0	June 1877
80	Wheal Owles, t, St. Just§	86 5 0	80	75 80	522 10 0	4 0 0	Aug. 1872
6000	Wheal Prussia, t, Redruth	2 0 0	4¾	4½ 4¾	0 4 0	0 1 0	July 1877
25000	Wicklow c, sul, i, Wicklow	2 10 0	—		52 9 0	0 2 6	Mar. 1872
10000	Wye Valley, l, Montgomery*	3 0 0	3	2 3	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500	Alamillos, l, Spain*†	2 0 0	1½ xd	1¼ 1¾ xd	1 18 3	0 1 0	Oct. 1877
30000	Almada and Tirito Consol., s*†	1 0 0	⅜	¼ ½	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	1¾	1¼ 1¾	0 19 6	0 1 6	July 1877
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	⅝	½ ¾	0 14 0	0 2 6	June 1874
12320	Burra Burra,* c, So. Australia	5 0 0	—		70 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining,*† So. Africa	7 0 0	36	33 35	28 15 0	1 0 0	June 1877
40000	Cedar Creek, g, California*	5 0 0	⅝	⅜ ⅝	0 5 0	0 2 6	June 1873
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	—		0 10 6	0 3 0	Aug. 1877
15000	Chicago, s, Utah*	10 0 0	2¼	1¾ 2¼	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	2	1½ 2	0 13 6	0 4 0	Jan. 1875
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey*†	0 16 0	⅝	⅜ ⅝	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt & Aurora, s, Nevada*†	10 0 0	5¼	5 5½	1 8 0	0 3 0	Dec. 1876
70000	English & Australian, c† S. Aust.	2 10 0	1½	1¼ 1½	2 15 9	0 1 0	Mar. 1877
30000	Flagstaff, s, Utah*	10 0 0	2¾	2¼ 2¾	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	5¼ xd	5 5½ xd	6 14 10	0 6 8	Oct. 1877
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	3	2½ 3	0 1 0	0 1 0	June 1876
30000	Gold Run, hyd.	1 0 0	—		0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	1½	⅞ 1½	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	3 0 0	6¾	6 6½ xd	17 3 10	0 6 8	Oct. 1877
65000	London and California, g*†	2 0 0	½	¼ ½	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
5000	Mamm Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	28	26 28	23 1 1	1 11 1	Nov. 1876
100000	Port Phillip, g, Clunes*†	1 0 0	⅝	½ ⅝	1 9 0	0 1 0	Sept. 1877
54000	Richmond Consols, s, Nevada*†	5 0 0	5	4¾ 5¼	3 9 0	0 7 6	Oct. 1876
40000	Santa Barbara,* g, Brazil	0 10 0	2	1¾ 2	0 3 9	0 1 3	May 1877
120000	Scottish Australian Mining Co.*†	1 0 0	2	1¾ 2	15 per cent.		June 1877
80000	Scottish Austral. Mining Co., New	0 5 0	½	⅜ ½	15 per cent.		June 1877
112500	Sierra Buttes, g, California*†	2 0 0	1¾	1¼ 1¾	1 16 0	0 2 0	Oct. 1876
60000	South Aurora, s, Nevada*	5 0 0	⅜	⅛ ¼	0 14 2	0 2 0	Nov. 1873
£253000	St. John del Rey*† (£5 stock & multiples dealt in)			310 320	½ year	20 p. ct. for	Dec. 1876
20000	Tolima, g, s* So. America	5 0 0	—		0 11 6	0 6 6	May 1874
25000	Victoria (London)*, g, Australia	1 0 0	¾	⅝ ¾	0 11 10½	0 0 10	Aug. 1876
15600	Western Andes, s,* New Granada	5 0 0	—		12 per cent. per an.		July 1876
21000	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	11¼	10¾ 11¼	1 4 0	0 8 0	April 1877

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
5000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—		Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	3	1½ 2½	Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, hyd., California	5 0 0	3¼	3 3¼	Fully pd.
49935	Chontales, g, s, Nicaragua*†	2 0 0	⅜	¼ ⅜	Fully pd.
16000	Condes of Chili, s-l	5 0 0	3¼	2½ 3¼	Fully pd.
20000	English Australian, g, Victoria*	0 10 0	⅞	⅝ ⅞	Fully pd.
85000	Excelsior Hydraulic Gold Washing Co., California*	5 0 0	—		Fully pd.
100000	Exchequer, g, s, California*†	1 0 0	⅜	¼ ⅜	Dec. 1871
40000	Holcombe Valley, g,* California	1 0 0	—		Fully pd.
8000	Hornachos,* s-l, Spain	10 0 0	13	12 13	July 1873
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	5	4½ 5	Fully pd.
2[illegible]000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Fully pd.
10[illegible]000	I. X. L., g, s, California*	1 0 0	½	⅜ ½	Fully pd.
50000	Javali, g, Nicaragua*	2 0 0	½	⅜ ½	Fully pd.
3500	La Manche, l, Newfoundland	10 0 0	—		Fully pd.
12000	Lanestosa,* l, z, Viscaya, Spain (£2 shares)	1 15 0	—		Mar. 1876
75000	Malabar, g, Colombia* (67165 issued)	1 0 0	⅞	⅝ ⅞	Fully pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	¾	⅝ ¾	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—		Fully pd.
4588	New Bensberg, i, l, Germany	5 0 0	—		Nov. 1876
64000	New Quebrada, c, Venezuela*	5 0 0	3	2¾ 3	Fully pd.
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	1¼	1 1¼	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	—		Sept. 1875
50000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	1¼	¾ 1¼	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	¼	⅛ ¼	Fully pd.
50000	Providencia and New Rosario, s, Mexico*	1 0 0	—		Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	¼	⅛ ¼	Fully pd.
£2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	59	57½ 58½	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 19 0	⅛	⅛	July 1872
30000	Russia Copper, Orenburg and Ufa*†	10 0 0	2	1½ 2	Fully pd.
25000	San Pedro, c, Chili*	2 0 0	⅝	⅜ ⅝	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—		Fully pd.
30000	Tecoma, s, Utah*	10 0 0	¾	¼ ½	Fully pd.
20000	Thornhill Reef, g, Australia*	1 0 0	—		Fully pd.
43174	United Mexican, s, Mexico*†‡	28 15 3	2	1½ 2	May 1875
14000	Utah, g, s-l, Utah*	5 0 0	—		Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	⅜	⅛ ¼	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	¾ 1	Fully pd.

§ Have made calls since last dividend was paid

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.			Closing Prices.	
Argentine, 1868, 6 per cent.	67	69	Foreign and Col. Gov. Trust, 6 p. ct.	65	70
Bolivia, 6 per cent.	24	25	Do., 5 per cent., 2d issue	52	57
Brazilian, 1865, 5 per cent.	93	95	Do., 6 per cent., 3d issue	53	58
Chilian, 1866, 7 per cent.	100	103	Do., 1872, 4th issue	45	50
City of Providence, 5 p.c. coupon bnds	98	100	Do., 1873, 5th issue	46	51
Egyptian, 5 per cent. pref.	58½	59	Peruvian, 1870, 6 per cent.	13¼	13¾
Do., unified debt, scrip	33¾	34¼	Do., 1872, 5 per cent	11¼	11¾
Do., 7 per cent., V.M.L.	64	66	Russian, 5½ per cent. L. Mort.	67	71
Do., 9 per cent. guar.	73	75	Spanish, Quicksilver Mort., 5 p. ct.	95	97
Do., 7 per cent., K.M.L.	41	43	United States Mort., 6 per cent.	96	98

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr.
40000	Aberdannant, l, Llanidloes*	1 0 0	1⅜	1⅛ 1⅜
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
80	Albion,* i, Cornwall	100 0 0	—	
7800	Alvig. & Burng.,* t, St. Aust.	3 0 0	3⅜	3⅛ 3⅜
18000	Ambrose Lake, t, c, Liskeard	1 18 6	—	
12000	Assheton, l, Carnarvonshire*	5 0 0	1¼	1 1¼
50000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford United, c, Tavistock	2 0 6	⅜	¼ ⅜
28000	Belstone,* c, Devon (27,000 fy. pd.)	1 0 0	—	
15000	Blaen United,* s-l, Cardigan	1 0 0	—	
3937	Blue Hills, t, c, St. Agnes	3 7 6	—	
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1¼	1 1¼
1000	Bollihope Vale,* s-l, Durham	5 0 0	5¾	5 5¼
200	Botallack, t, c, St. Just‡	121 5 0	17½	15 17½
2000	Bowden Hill,* mn	1 0 0	—	
6000	Bradwell Moss Rake	1 0 0	1	¾ 1
30000	Caldbeck Fells, l, Cumberland*	2 0 0	—	
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	2½	2 2½
3348	Cargoll, s-l, Newlyn‡	6 9 0	3½	3 3½
10000	Caron, l, Cardigan*	2 0 0	2½	2¼ 2½
20000	Central Foxdale, l, I. of Man* (2l. sh.)	1 5 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
128	Clementina, l, Llanrwst	20 0 0	—	
7500	Combellack,* t, Wendron	2 0 0	2	1½ 2
6000	Combmartin, s-l, North Devon	0 7 0	½	⅜ ½
24000	Court Grange, s-l. (6000 sh. 10s. pd.)	1 0 0	1⅝	1⅜ 1⅝
20000	Cwm Dwyfor,* c, s-l, Carnarvonsh	0 16 3	—	
65[illegible]	Cwm Lanarch,* s-l, Carnarvon	2 0 0	—	
3000	Cwmystwith (New) [5l. shares]	4 0 0	—	
512	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	25	20 25
10000	Denbighshire Consolidated, l*	3 0 0	2	1½ 2
12000	Derwent,* l, Durham	4 0 0	3	2 3
10000	Dubby Syke, l, Durham*	0 12 6	½	½
6144	East Caradon, c, St. Cleer‡	2 16 6	½	¼ ¾
4000	East Chiverton, l, Perranzabuloe	6 17 0	2½	2 2½
3000	East Craven Moor, l, Pateley Bridge	10 0 0	11	9½ 10½
6000	East Goginan, l, Cardigan	2 0 0	—	
18000	East Van, l, Llanidloes*	5 0 0	4¾	4 4½
1722	East Wh. Lovell, t, Helston	8 11 0	—	
20000	Elgar,* s-l, Cardiganshire	1 0 0	1¼	1 1¼
8000	Fronvellan, l, Mont.* [4000 sh. fy. pd.]	1 0 0	—	
3950	Gawton, c, Tavistock	4 5 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	
14000	Glenroy,* s-l, Isle of Man	4 0 0	1	⅞ 1
10000	Glyn,* l, Llanidloes	2 0 0	⅝	⅜ ⅝
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	
100000	Gold, g, Merionethshire	1 0 0	—	
30000	Goreu,* s-l, Carmarthen	1 0 0	1¼	1⅛ 1¼
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	
12000	Great Holway,* l, Flintshire	5 0 0	6	5 6
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
6000	Gt. Wheal Eleanor, t, North Bovey.	1 0 0	3	2 3
18000	Grosvenor, l, Holywell (£1 sh.)	0 15 0	—	
10000	Harehope Gill,* l, Durham (£1 sh.).	0 5 0	—	
6400	Harwood,* l, Durham	0 15 0	1	1
5000	Hush Eisteddfod Minera,* l	2 0 0	—	
200	Islay,* l, Scotland	28 0 0	—	
2500	Killaloe, sl, Tipperary‡	1 0 0	—	
4000	Killifreth, t, Chacewater	2 1 0	¼	⅛ ¼
25000	Kingston Con., s-l, Stoke Climsland.	1 0 0	—	
	Ditto, preference	1 0 0	⅝	½ ⅝
12000	Ladywell,* l, Salop	2 10 0	1⅛	⅞ 1⅛
12000	Ditto, 10 per cent. pref., 1l. each	0 10 0	⅜	¼ ⅜
2500	Levant, c, t, St. Just	9 18 6	—	
25000	Llanrhaiadr, l, Montgomery*	2 0 0	—	
30000	Llanrwst,* l, Carnarvon	2 0 0	4½	4 4½
15000	Llwyn Teify,* s-l, Cardigan	1 0 0	—	
6000	Medlyn Moor, t, Wendron	1 17 4	2	2
3500	Mellanear Copper, Hayle*	2 0 0	2½	2¼ 2½
6500	Ditto	1 15 0	2	1¾ 2
[illegible]	Melyndwr, l, Cardigan*	3 0 0	¾	½ ¾
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	4	3 4
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
4525	New Bronfloyd,* l, Cardigan (5l. sh.)	3 10 0	—	
20000	New Consols, s, a (in liquidation)		—	
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¼	1⅛ 1¼
20000	New East Foxdale, s-l, Isle of Man.	0 15 0	—	
18000	New Fowey Consols, t, St. Blazey*.	3 0 0	2	1½ 2
1492	New Hendra, t, Breage	3 9 0	—	
3200	New South Merllyn, l, Flint*	2 10 0	1	½ 1
5000	New Wheal Emma, c, Buckfastleigh	2 0 0	—	
4000	North Cornwall, l, Cornwall	5 0 0	5¼	5 5¼
17000	North Laxey,* Isle of Man	2 0 0	¾	⅝ ¾
2000	North Levant, t, c, St. Just‡	12 2 0	—	
20000	North Prince Patrick,* l, Holywell.	1 0 0	—	
5936	North Treskerby, c, St. Agnes	3 17 10	—	
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	
2500	Old Tincroft, c, t, Lelant*	4 0 0	4	3 4
6400	Oola Hills,* s-l, Limerick	5 0 0	—	
12000	Pandora,* l, Carnarvon	2 0 0	1¼	½ 1
30000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	2	2 2
16923	Parys Mountain,* c, Anglesea	3 0 0	⅜	¼ ⅜
4000	Pateley Bridge, l, Yorkshire	5 0 0	2¼	1¾ 2¼
30000	Perkins Beach, l, Shropshire	1 0 0	1¼	1 1¼
12000	Plynlimmon, l, Llanidloes*	2 0 0	⅜	⅜
648	Polrose, t, Breage	21 0 0	—	
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	2½	2 2½
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
5182	Prince of Wales, c, Calstock‡	2 2 0	¼	¼
10000	Red Rock,* l, Cardigan	2 0 0	2¼	2 2¼
6000	Relistian Consols, c, Gwinear	0 10 0	⅜	⅛ ⅜
15000	Rookhope, l, Durham*	1 10 0	1	⅞ 1⅛
5000	Silvercross,* c, t, Marazion	1 0 0	¾	½ ¾
4200	Snowbrook, s-l, Montgomery	5 0 0	5¼	5⅛ 5¼
[illegible]000	So. Cwmystwith, l, Cardiganshire	2 0 0	3½	2½ 3½
6000	South Darren, l, Cardigan*	1 10 0	—	
512	South Dolcoath, c, t, Redruth	12 5 0	1¼	1 1¼
18000	South Roman Gravels, l*	1 10 0	⅜	½ ⅝
6000	South Roskear, t, c, Camborne	6 10 0	5	4 5
6000	South Tolcarne, t, c, Camborne	1 14 0	¾	½ ¾
937	South Wheal Crofty, c, Illogan	38 10 10	9	8 9
4500	South Wh. Frances, c, Illogan†	7 12 4	⅞	⅝ ⅞
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1⅜	1⅛ 1⅜
8000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	
16000	Sunnyside,* l, Durham	2 0 0	2½	2 2½
30000	Talybont, s-l, Cardiganshire	1 0 0	1¼	1 1¼
6400	Teesdale,* l, Durham	1 0 0	⅞	¾ ⅞
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
10000	Temple, l, Cardigan*	1 0 0	1¾	1¼ 2¼
10000	Tolgus Consols,* c, Redruth	5 0 0	5¾	5 5¼
12000	Trebeigh Consols, s-l, St. Ive	0 9 0	⅜	¼ ⅜
5000	Treleigh Wood, t, Redruth	6 1 0	—	
547	Trelyon Consols	15 0 0	⅝	½ ⅝
12000	Trethellan, s-l, Crantock*	2 0 0	—	
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1½	1 1½
20000	Van Consols, l, Llanidloes*	2 10 0	⅝	⅜ ⅝
1000	Vaughan*, l., Cardiganshire	10 0 0	—	
12000	West Assheton, l, Carnarvon	1 0 0	1	¾ 1
6000	West Basset, c, Illogan†‡	6 0 0	2s.	1s. 2s.
5500	West Combmartin, s-l, North Devon	1 0 0	⅞	⅝ ⅞
7000	Ditto	0 2 6	¾	½ ¾
3000	W. Craven Moor, l, Pateley Bridge*.	10 0 0	11	9½ 10½
5000	West Godolphin, t, c, Breage	2 6 0	2¼	1½ 2
12000	West Goginan,* Cardiganshire	2 0 0	⅜	⅛ ⅜
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
3000	West Mary Ann, l, Menheniot	0 3 6	1	⅞ 1
50000	West Milwr, s-l, Flint	1 0 0	—	
5000	West of England Granite Company.	2 0 0	2	2
20000	West Pateley Bridge, l, Yorkshire	1 0 0	2¼	1¾ 2
1000	West Roskear, t, s-l, bl, c, Camborne.	2 0 0	5	10 15
12000	West Tankerville,* l, Salop	3 0 0	1	⅞ 1
3000	Ditto, 15 per cent. pref.	3 0 0	2	1¾ 2
15000	West Treasvean,* c, t, Gwennap	1 0 0	1⅜	1¼ 1⅜
3000	West Wheal Peevor, t, Redruth	0 10 0	—	
600	West Wheal Seton, c, Camborne†	47 0 0	23¼	17½ 22½
6000	Wheal Agar, c, Illogan	12 0 0	3½	3½ 4
512	Wheal Basset, c, Illogan‡	22 2 6	5	3 5
6000	Wheal Coates, t, St. Agnes	2 0 0	2	1½ 2
2635	Wheal Comfort, c, Gwennap	1 5 0	5	4½ 5
6000	Wheal Crebor, c, Tavistock	4 1 0	2	1½ 2
5179	Wheal Grenville, c, Camborne*	2 18 6	2	2¼ 2¾
12000	Wh. Mary Hutchings,* t, Plympton	1 14 0	—	
3000	Wheal Peevor, t, Redruth	6 7 6	3¾	3¼ 3¾
12000	Wheal Russell, c, Tavistock	2 1 6	⅜	¼ ⅜
4096	Wheal Uny, t, c, Redruth	13 11 6	⅞	1 1½
480	White Cliff,* l, Llanrwst	4 0 0	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.
£100	Abbot, John, and Co. [L.]	75 0 0
15	Albion Steel and Wire Co. [L.]	14 0 0
5	Alltami Colliery Co. [L.]	5 0 0
100	Ashbury Co. [L.]	90 0 0
10	Bagnall, John, and Sons [L.]	10 0 0
10	Benhar Coal Co. [L.]	10 0 0
50	Bilbao Iron Ore Co. [L.]	50 0 0
10	Bilson & Crump Meadow Coll. Co. [L.]	10 0 0
4	Blaen Cwmbach Coal Co. [L.]	4 0 0
50	Blaenavon Iron and Steel Co. [L.]	80 0 0
100	Bolckow, Vaughan, and Co. [L.]	45 0 0
50	Bowling Iron Co. [L.]	50 0 0
50	Britannia Ironworks [L.]	25 0 0
50	Brown, Bailey, and Dixon [L.]	40 0 0
100	Brown, John, and Co. [L.]	70 0 0
5	Cakemore Colliery Co. [L.]	5 0 0
100	Cammell and Co. [L.]	80 0 0
20	Cannock and Huntington Coal [L.]	6 0 0
10	Cardiff & Swansea St. Coal Co. [L.]	9 0 0
10	Cardigan Steel and Wire Co. [L.]	8 10 0
10	Central Swedish Iron and Steel [L.]	10 0 0
5	Chapel House Colliery	5 0 0
50	Charlton Iron Co. [L.]	50 0 0
50	Chatterley Iron Co. [L.]	45 0 0
10	Chillington Iron Co. [L.]	10 0 0
1	Clee Hill Colliery Co. [L.]	1 0 0
10	Consett Iron Co. [L.]	7 10 0
1	Consett Spanish Ore [L.]	1 0 0
50	Cooke, William, and Co. [L.]	40 0 0
20	Darlington Iron Co. [L.]	12 10 0
50	Davy Brothers [L.]	22 10 0
5	Diamond Fuel Co. [L.]	5 0 0
32	Ebbw Vale Co. [L.]	29 0 0
100	Fox, Samuel, and Co. [L.]	80 0 0
10	General Mining Ass. [L.] (£1 returned)	9 0 0
20	Great Western Coal Co. [L.]	17 0 0
2	Gwyngwillim Colliery Co. [L.]	2 0 0
15	Hopkins, Gilkes, and Co. [L.]	11 0 0
50	Knowles, Andrew, and Sons [L.]	17 0 0
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0
5	Littledean Woodside Coll. Co. [L.]	5 0 0
50	Llynvi, Ogmore, & Tondu Co. [L.]	60 0 0
10	Lydney and Wigpool Iron Ore [L.]	8 5 0
10	Marbella Iron Ore Co. [L.]	10 0 0
6	Mersey Steel and Iron Co. [L.]	5 0 0
10	Midland Iron Co. [L.]	5 0 0
5	Mold Argoed Colliery Co. [L.]	5 0 0
10	Monkland Iron and Coal Co. [L.]	10 0 0
4	Mwyndy Iron Ore [L.]	3 10 0
100	Nant-y-Glo and Blaina (8 p.c. pref.)	100 0 0
3	Nerbudda Coal and Iron [L. & Red.]	2 0 0
20	New Sharlston Collieries [L.] Pref.	20 0 0
10	Newport Abercarn Coal Co. [L.]	10 0 0
10	Northmptn. Coal, Iron & Wagon [L.]	8 0 0
10	Northfield Iron Co. [L.]	8 0 0
1	Norton Green Coal Co. [L.]	1 0 0
35	Palmer's Shipbuilding and Iron [L.]	35 0 0
100	Parkgate Iron Co. [L.]	65 0 0
20	Patent Nut and Bolt Co. [L.]	14 0 0
20	Patent Shaft and Axletree [L.]	10 0 0
20	Pelsall Coal and Iron [L.]	15 0 0
50	Phœnix Bessemer Co. [L.]	40 0 0
50	Rhymney Iron Co. [L.]	50 0 0
10	Richards and Co. [L.]	10 0 0
100	Sandwell Park Colliery Co. [L.]	100 0 0
50	Ditto New	10 0 0
100	Shotts Iron Co. [L.]	100 0 0
100	Sheepbridge Iron and Coal [L.]	55 0 0
50	Silkstone & Dodworth Cl. & Iron [L.]	27 0 0
20	Skerne Ironworks [L.]	20 0 0
50	Somorrostro Iron Co. [L.]	50 0 0
25	South Wales Coal Co. [L.]	21 0 0
100	Staveley Iron and Coal Co. [L.]	60 0 0
100	Ditto ditto New	10 0 0
10	Swansea Valley Steam Coll. Co. [L.]	6 0 0
100	Thames Iron Company	100 0 0
50	Tredegar Iron and Coal Co. [L.]	20 0 0
25	Ditto B. shares	25 0 0
20	Ulverston Mining Co. [L.]	12 0 0
10	Vancouver Coal [L.]	6 0 0
100	Vickers, Sons, & Co. [L.]	100 0 0
50	Welsh Ironworks Co. [L.]	50 0 0
25	W. Cumberland I. and Steel [L.]	20 0 0
10	West Mostyn Coal [L.] (12 p.c. pref.)	5 0 0
5	West Swansea Colliery Co. [L.]	5 0 0
10	Whitehaven Iron Co. [L.]	10 0 0
100	Wigan and Whiston Coal Co. [L.]	70 0 0
100	Wigan Coal and Iron Co. [L.]	75 0 0

WAGON COMPANIES.

Shares.	Company.	Paid.
10	Birmingham Wagon Co. [L.]	10 0 0
10	Ditto, 2nd issue	4 0 0
10	Ditto, pref., 6 per cent.	10 0 0
20	British Wagon Co. [L.]	10 0 0
10	Gloucester [L.]	10 0 0
10	Ditto, 5th issue	5 0 0
10	Met. Rail. Car. and Wagon Co. [L.]	5 0 0
5	Ditto, pref., 6 per cent.	5 0 0
10	Midland	10 0 0
20	North Central Wagon Co.	20 0 0
5	Rail. Car. [L.] (Oldbury)	5 0 0
5	Ditto, pref., 6 per cent.	5 0 0
20	Sheffield Wagon Co. [L.]	15 0 0
10	Yorkshire Wagon Co. [L.]	10 0 0

TELEGRAPH COMPANIES.

Shares.	Company.	Paid.
"St."	Anglo-American	100 0 0
10	Brazilian Submarine	10 0 0
20	Direct United States Cable	20 0 0
10	Eastern	10 0 0
10	East. Exten., Australia and China	10 0 0
10	Great Northern	10 0 0
25	Indo-European	25 0 0
10	Mediterranean Extension	10 0 0
8	Reuters	8 0 0
Stk.	Submarine	100 0 0
10	West India and Panama	10 0 0
20	Western and Brazilian	20 0 0
$1000	Western Union, 7 per cent. Mort. Bonds	$1000

MISCELLANEOUS.

Shares.	Company.	Paid.
Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100 0 0
25	Austral. Mort. Land and Finance [L.]	5 0 0
25	Australian Agricultural	21 10 0
10	Avonside Engine [L.]	7 0 0
Stk.	Baltimore and Ohio, 6 per cent.	100 0 0
10	Brighton Aquarium [L.]	10 0 0
Stk.	Cent. of New Jersey Con. Mort.	100 0 0
Stk.	Cent. Pacific of Calif., 1st Mort. 6 p.c.	100 0 0
25	City of London Real Property [L.]	12 0 0
25	Copper Miners of Eng. (7 p. c. pref.)	25 0 0
5	Diamond Rock Boring	4 10 0
15	English and Foreign Credit	8 0 0
16	Fore Street Warehouse [L.]	14 0 0
15	Foster, Porter, and Co. [L.]	10 10 0
5	Gen. Phos. & Chem. Works Co. [L.]	5 0 0
1	Glaisdale Whinstone Quarry	1 0 0
5	Kit Hill Tunnel [L.]	1 0 0
17	Hudson's Bay Company	17 0 0
10	Huntington Copper and Sul. Co.	9 0 0
Stk.	Illinois Central, $100 shares	100 0 0
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100 0 0
Stk.	Ditto, 2nd Mort., 7 per cent.	100 0 0
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100 0 0
Stk.	Ditto, 6 per cent.	100 0 0
7½	Imperial Credit [L.]	7 10 0
—	Ditto, Surplus Certificate	—
Stk.	Lehigh Val. Con. Mort., A, 6. p. cent.	100 0 0
10	Milner's Safe [L.]	10 0 0
25	National Discount [L.]	5 0 0
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	10 0 0
10	Pawson and Co. [L.]	6 0 0
50	Peninsular and Oriental Steam	50 0 0
Stk.	Pennsyl. Gen. Mort. 6 p. cent., 1910.	100 0 0
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100 0 0
Stk.	Scottish Aust. Investment Company.	100 0 0
Stk.	Ditto, 6 per cent. Preference	100 0 0
10	Silber Light (ord. sh.)	10 0 0
20	Suez Canal shares	20 0 0
12	Telegraph Construc. & Mainte. [L.]	12 0 0
5	Ditto, Second Bonus Three per Cents	5 0 0
10	Tharsis Sulphur and Copper Co.	10 0 0
Stk.	Union Pacific Land Grant, 1st Mort.	100 0 0
Stk.	Union Pacific Railway, 1st Mort.	100 0 0

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